

APPROVAL OF COUNCIL MEETING MINUTES

The draft March 2014 Pacific Fishery Management Council (Council) meeting minutes will be provided for Council review and approval in Supplemental Agenda Item C.1.a, Attachment 1.

The full record of each Council meeting is maintained at the Council office, and consists of the following:

1. The meeting notice and proposed agenda (agenda available online at <http://www.pcouncil.org/resources/archives/briefing-books/>).
2. The approved minutes (available online at <http://www.pcouncil.org/council-operations/council-meetings/past-meetings/>). The minutes summarize actual meeting proceedings, noting the time each agenda item was addressed and identifying relevant key documents. The agenda item summaries consist of a narrative on noteworthy elements of the gavel-to-gavel components of the Council meeting and summarize pertinent Council discussion for each Council Guidance, Discussion, or Action item, including detailed descriptions of rationale leading to a decision and discussion between an initial motion and the final vote.
3. Audio recordings of the testimony, presentations, and discussion occurring at the meeting. Recordings are labeled by agenda number and time to facilitate tape or CD-ROM review of a particular agenda item (available from our recorder, Mr. Craig Hess, Martin Enterprises, martinaudio@aol.com).
4. All documents produced for consideration at the Council meeting, including (1) pre-meeting advance briefing book materials, (2) pre-meeting supplemental briefing book documents, (3) supplemental documents produced or received at the meeting, validated by a label assigned by the Council Secretariat and distributed to Council Members; (4) written public comments received at the Council meeting in accordance with agenda labeling requirements; and (5) electronic material or handout materials used in presentations to Council Members during the open session (available online at <http://www.pcouncil.org/council-operations/council-meetings/past-meetings/>).
5. The Council Decision Summary Document. This document is distributed immediately after the meeting and contains very brief descriptions of Council decisions (available online at <http://www.pcouncil.org/resources/archives/council-meeting-decisions/>).
6. Draft or final decision documents finalized after the Council meeting such as Environmental Impact Statements or Environmental Assessments.
7. Pacific Council News. There are between two and four editions of the Pacific Council News produced each year. The Spring Edition covers March and April Council meetings; the Summer Edition covers the June Council meeting; the Fall Edition covers the September meeting; and the Winter Edition covers the November Council meeting. In some years the

Summer Edition may be combined with the Spring Edition, and/or the Fall Edition Combined with the Winter Edition. The Pacific Council News is available online at <http://www.pcouncil.org/resources/archives/newsletters/>.

Council Action:

Review and approve the draft March 2014 Council meeting minutes.

Reference Materials:

1. Agenda Item C.1.a, Supplemental Attachment 1: Draft Minutes: 222nd Session of the Pacific Fishery Management Council (March 2014).

Agenda Order:

- a. Council Member Review and Comments
 - b. **Council Action:** Approve Previous Council Meeting Minutes
- Dorothy Lowman

PFMC
05/29/14

DRAFT MINUTES
222nd Session of the
Pacific Fishery Management Council
March 8-13, 2014
Doubletree Hotel Sacramento
2001 Point West Way, Sacramento, CA 95815

Table of Contents

A.	Call to Order (March 8, 2014; 8:49 a.m.).....	8
A.1	Opening Remarks.....	8
A.2	Roll Call.....	8
A.3	Executive Director's Report	8
A.4	Agenda	9
A.4.a	Council Action: Approve Agenda	9
B.	Open Comments.....	9
B.1	Comments on Non-Agenda Items (3/8/2014 9:18 a.m.)	9
B.1.a	Advisory Bodies and Management Entity Comments	9
B.1.b	Public Comment	10
B.1.c	Council Discussion and Comments as Appropriate	10
C.	Ecosystem-Based Management	10
C.1	California Current Ecosystem Report including Integrated Ecosystem Assessment (3/8/2014; 9:35 a.m.).....	10
C.1.a	Agenda Item Overview	10
C.1.b	Reports and Comments of Advisory Bodies and Management Entities.....	10
C.1.c	Public Comment	10
C.1.d	Council Discussion	11
D.	Groundfish Management	11
D.1	National Marine Fisheries Service (NMFS) Report (3/8/2014; 1:04 p.m.).....	11
D.1.a	Agenda Item Overview	11
D.1.b	Regulatory Activities	12
D.1.c	Fisheries Science Center Activities	12
D.1.d	Reports and Comments of Advisory Bodies and Management Entities.....	12
D.1.e	Public Comment	12
D.1.f	Council Discussion	12

D.2	Essential Fish Habitat (EFH) Evaluating Criteria and Phase 2 Report (3/8/2014; 1:57 p.m.)	13
D.2.a	Agenda Item Overview	13
D.2.b	Essential Fish Habitat Review Committee Report	13
D.2.c	Reports and Comments of Advisory Bodies and Management Entities.....	13
D.2.d	Public Comment (3/8/2014; 3:48 p.m.).....	13
D.2.e	Council Action: Provide Guidance on Criteria for Evaluating the Effectiveness of Existing EFH Provisions and Consider Finalizing the Essential Fish Habitat Review Committee (EFHRC) Phase 2 Report (3/8/2014; 4:42 p.m.)	14
D.3	Consider Barotrauma Device Morality Rates (3/9/2014; 2:36 p.m.)	17
D.3.a	Agenda Item Overview	17
D.3.b	Reports and Comments of Advisory Bodies and Management Entities.....	17
D.3.c	Public Comment	17
D.3.d	Council Action: Approve Bycatch Mortality Rates Associated with Barotrauma Reduction Devices in Groundfish Fisheries	17
D.4	Consideration of Inseason Adjustments, Including Carryover (3/9/2014; 4:11 p.m.)	20
D.4.a	Agenda Item Overview	20
D.4.b	Reports and Comments of Advisory Bodies and Management Entities.....	20
D.4.c	Public Comment	20
D.4.d	Council Action: Adopt Recommendations for Adjustments to 2014 Groundfish Fisheries, Including Carryover	20
D.5	Biennial Harvest Specifications for 2015-2016 and Beyond Groundfish Fisheries (3/10/2014; 8:58 a.m.).....	21
D.5.a	Agenda Item Overview	21
D.5.b	Reports and Comments of Advisory Bodies and Management Entities (3/10/2014; 10:47 a.m.)	22
D.5.c	Public Comment	22
D.5.d	Council Action: Adopt Final Remaining Overfishing Limits, and Receive Update on the Status of the National Environmental Policy Act (NEPA) Document (3/10/2014; 2:44 p.m.)	22
D.6	Trawl Rationalization Trailing Actions (3/11/2014; 8:11 a.m.)	24
D.6.a	Agenda Item Overview	24
D.6.b	Reports and Comments of Advisory Bodies and Management Entities.....	24
D.6.c	Public Comment	24

D.6.d	Council Action: Provide Guidance on Implementation and Adaptive Management Program Pass-Through.....	24
E.	Habitat	29
E.1	Current Habitat Issues (3/9/2014; 8:04 a.m.)	29
E.1.a	Agenda Item Overview	29
E.1.b	Report of the Habitat Committee.....	29
E.1.c	Reports and Comments of Advisory Bodies and Management Entities.....	29
E.1.d	Public Comments	29
E.1.e	Council Action: Consider Habitat Committee Recommendations	29
F.	Salmon Management	30
F.1	Review of 2013 Fisheries and Summary of 2014 Stock Abundance Forecasts (3/9/2014; 9:23 a.m.)	30
F.1.a	Agenda Item Overview	30
F.1.b	Reports and Comments of Advisory Bodies and Management Entities.....	31
F.1.c	Public Comment	31
F.1.d	Council Action: Review and Discuss Relevant Fishery Information; Act on Relevant Status Determinations, and Adopt 2014 Abundance Forecasts and Annual Catch Limits as Necessary	31
F.2	Identification of Management Objectives and Preliminary Definition on 2014 Salmon Management Alternatives (3/9/2014; 10:01 a.m.).....	31
F.2.a	Agenda Item Overview	31
F.2.b	Report of the Pacific Salmon Commission.....	31
F.2.c	Reports and Comments of Advisory Bodies and Management Entities.....	32
F.2.d	Public Comment	32
F.2.e	Council Action: Adopt Council Recommendations for Initial Alternatives for Salmon Technical Team Collation and Description (3/9/2014; 1:20 p.m.)	32
F.3	NMFS Report (3/9/2014; 1:39 p.m.)	33
F.3.a	Agenda Item Overview	33
F.3.b	Regulatory Activities	33
F.3.c	Fisheries Science Center Activities	34
F.3.d	Reports and Comments of Advisory Bodies and Management Entities.....	34
F.3.e	Public Comment	34
F.3.f	Council Discussion	34

F.4	Council Recommendations for 2014 Management Alternatives Analysis (3/10/2014; 8:09 a.m.).....	34
F.4.a	Agenda Item Overview	34
F.4.b	Reports and Comments of Advisory Bodies and Management Entities.....	34
F.4.c	Public Comment	34
F.4.d	Council Direction to the Salmon Technical Team and Salmon Advisory Subpanel on Alternative Development and Analysis	34
F.5	Further Council Direction on 2014 Management Alternatives (3/12/2014; 8:49 a.m.)	35
F.5.a	Agenda Item Overview	35
F.5.b	Reports and Comments of Advisory Bodies and Management Entities.....	35
F.5.c	Public Comment	35
F.5.d	Council Guidance and Direction	35
F.6	Adoption of 2014 Management Alternatives for Public Review (3/13/2014 9:47 a.m.).....	35
F.6.a	Agenda Item Overview	35
F.6.b	Reports and Comments of Advisory Bodies and Management Entities.....	36
F.6.c	Public Comment	36
F.6.d	Council Action: Adopt Management Alternatives for Public Review	36
F.7	Appoint Salmon Hearings Officers (3/13/2014; 10:30 a.m.)	37
F.7.a	Agenda Item Overview	37
F.7.b	Council Action: Appoint Salmon Hearings Officers	38
F.8	Sacramento Winter Chinook Harvest Control Rule (3/13/2014; 10:34 a.m.).....	38
F.8.a	Agenda Item Overview	38
F.8.b	Reports and Comments of Advisory Bodies and Management Entities.....	38
F.8.c	Public Comment	38
F.8.d	Council Action: Provide Guidance for Submitting Comments on the Sacramento Winter Chinook Harvest Control Rule.....	38
F.9	California Coastal Chinook Update (3/13/2014; 11:27 a.m.).....	40
F.9.a	Agenda Item Overview	40
F.9.b	Reports and Comments of Advisory Bodies and Management Entities.....	40
F.9.c	Public Comment	40
F.9.d	Council Action: Consider California Coastal Chinook Management Issues	40
G.	Pacific Halibut Management	41

G.1	Report on the International Pacific Halibut Commission (IPHC) Meeting (3/10/2014; 3:17 p.m.).....	41
G.1.a	Agenda Item Overview	41
G.1.b	IPHC Report	41
G.1.c	Council Representative Report.....	41
G.1.d	Reports and Comments of Advisory Bodies and Management Entities.....	41
G.1.e	Public Comment	41
G.1.f	Council Discussion	41
G.2	Incidental Catch Recommendations for the Salmon Troll and Fixed Gear Sablefish Fisheries (3/11/2014; 10:12 a.m.).....	42
G.2.a	Agenda Item Overview	42
G.2.b	Reports and Comments of Advisory Bodies and Management Entities.....	42
G.2.c	Public Comment	42
G.2.d	Council Action: Adopt Public Review Options for 2014 and April 2015 Salmon Troll Fishery; Make Recommendations for Inseason Changes to April 2014 Retention Limits in the Salmon Troll Fishery, as Necessary; Adopt Final Retention Limits for 2014 Fixed Gear Sablefish Fishery.	42
H.	Enforcement	43
H.1	Vessel Monitoring System (VMS) Ping Rate (3/11/2014; 11:04 a.m.)	43
H.1.a	Agenda Item Overview	43
H.1.b	Office of Law Enforcement Report	43
H.1.c	Reports and Comments of Advisory Bodies and Management Entities.....	44
H.1.d	Public Comment	44
H.1.e	Council Discussion (3/11/2014; 1:25 p.m.)	44
I.	Coastal Pelagic Species Management	45
I.1	Pacific Sardine Temperature Parameter Review (3/11/2014; 1:40 p.m.)	45
I.1.a	Agenda Item Overview	45
I.1.b	Report on Pacific Sardine Temperature Parameters.....	45
I.1.c	Reports and Comments of Advisory Bodies and Management Entities.....	45
I.1.d	Public Comment (3/11/2014; 3:13 p.m.).....	46
I.1.e	Council Action: Consider Technical Changes in Temperature and Stock Productivity Parameter Changes and Other Fishery Management Changes for Pacific Sardine	46

J.	Administrative Matters	48
J.1	Magnuson-Stevens Act (MSA) Reauthorization Priorities and other Legislative Matters (3/11/2014; 4:35 p.m.).....	48
J.1.a	Agenda Item Overview	48
J.1.b	Report of the Legislative Committee.....	48
J.1.c	Reports and Comments of Advisory Bodies and Management Entities.....	48
J.1.d	Public Comment	49
J.1.e	Council Action: Consider the Report and Recommendations of the Legislative Committee (3/12/2014; 8:09 a.m.)	49
J.2	Approval of Council Meeting Minutes (3/13/2014; 11:58 a.m.)	50
J.2.a	Council Member Review and Comments	50
J.2.b	Council Action: Approval of Previous Council Meeting Minutes.....	50
J.3	Membership Appointments and Council Operating Procedures (3/13/2014; 12:03 p.m.)	51
J.3.a	Agenda Item Overview	51
J.3.b	Reports and Comments of Advisory Bodies and Management Entities.....	51
J.3.c	Public Comment	51
J.3.d	Council Action: Consider Changes to Council Operating Procedures and Appointments to Advisory Bodies	51
J.4	Future Council Meeting Agenda and Workload Planning (3/13/2014; 12:16 p.m.)	52
J.4.a	Agenda Item Overview	52
J.4.b	Reports and Comments of Advisory Bodies and Management Entities.....	52
J.4.c	Public Comment	52
J.4.d	Council Action: Discussion and Guidance on Future Meeting Agenda and Workload Planning	52
K.	Highly Migratory Species management	53
K.1	National Marine Fisheries Service Report (3/12/2014; 9:37 a.m.)	53
K.1.a	Agenda Item Overview	53
K.1.b	Regulatory Activities	53
K.1.c	Fisheries Science Center Activities	53
K.1.d	Reports and Comments of Advisory Bodies and Management Entities.....	53
K.1.e	Public Comment	54
K.1.f	Council Discussion	54

K.2	Vessel Monitoring Systems (VMS) for Highly Migratory Species Fisheries (3/12/2014; 10:37 a.m.).....	55
K.2.a	Agenda Item Overview	55
K.2.b	National Marine Fisheries Service Report	55
K.2.c	Reports and Comments of Advisory Bodies and Management Entities.....	55
K.2.d	Public Comment	55
K.2.e	Council Action: Consider the NMFS Report and Provide Guidance for Implementation of VMS in Highly Migratory Species Fisheries	55
K.3	Recommendations for International Management Activities (3/12/2014; 11:26 a.m.).....	56
K.3.a	Agenda Item Overview	56
K.3.b	Reports and Comments of Advisory Bodies and Management Entities.....	57
K.3.c	Public Comment	57
K.3.d	Council Action: Provided Guidance for the Development of the Precautionary Framework for the North Pacific Albacore Tuna Management, Including Biological Reference Points and Discussion Rules (3/12/2014; 12:59 PM).....	57
K.4	U.S. – Canada Albacore Treaty Update (3/12/2014; 1:30 PM)	58
K.4.a	Agenda Item Overview	58
K.4.b	Reports and Comments of Advisory Bodies and Management Entities.....	58
K.4.c	Public Comment	58
K.4.d	Council Action: Adopt, as Necessary, Recommendations for the Fishery Regime Pursuant to the U.S. – Canada Albacore Treaty	58
K.5	Drift Gillnet Monitoring, Management, and Alternative Gear Report (3/12/2014; 2:25 p.m.)	59
K.5.a	Agenda Item Overview	59
K.5.b	Reports and Comments of Advisory Bodies and Management Entities.....	59
K.5.c	Public Comment	60
K.5.d	Council Action: Provide Guidance on Potential Changes in the Drift Gillnet Fishery (3/13/2014; 8:02 a.m.).....	60
ADJOURN	64

A. Call to Order (March 8, 2014; 8:49 a.m.)

A.1 Opening Remarks

Ms. Dorothy Lowman, Council Chair, called the 222nd meeting of the Pacific Fishery Management Council (Council) to order at 8:49 a.m. on Saturday, March 8, 2014. The open session was preceded by a closed session to discuss litigation and personnel matters.

A.2 Roll Call

Dr. Donald McIsaac, Council Executive Director, called the roll. The following Council members were present:

Mr. Phil Anderson (State of Washington Official)
Mr. William L. “Buzz” Brizendine (At-Large)
Mr. Troy Buell (State of Oregon Official, designee)
LCDR Gregg Casad (U.S. Coast Guard, non-voting designee)
Mr. David Crabbe (California Obligatory)
Mr. Jeff Feldner (At-Large)
Dr. Dave Hanson, Parliamentarian (Pacific States Marine Fisheries Commission, non-voting designee)
Mr. Rich Lincoln (Washington Obligatory)
Ms. Dorothy Lowman, Chair (Oregon Obligatory)
Mr. Dale Myer (At-Large)
Mr. David Ortmann (State of Idaho Official, designee)
Mr. Herb Pollard, Vice Chair (Idaho Obligatory)
Mr. Tim Roth (U.S. Fish and Wildlife Service (USFWS), non-voting designee)
Mr. David Sones (Tribal Obligatory)
Mr. Bob Turner (NMFS, West Coast Region, designee),
Mr. Gordon Williams (State of Alaska Official, non-voting designee)
Mr. Dan Wolford (At-Large)
Ms. Marci Yaremko (State of California Official, designee).

During the week the following people were present in their designated seats for portions of the meeting: Mr. Bob Farrell (State of California Official, designee); Ms. Joanna Grebel (State of California Official, designee); Ms. Michele Culver (State of Washington Official, designee); Mr. Kyle Adicks (State of Washington Official, designee); Mr. Frank Lockhart (NMFS, West Coast Region, designee); Mr. Mark Helvey NMFS, West Coast Region, designee); Ms. Gway Kirchner (State of Oregon Official, designee); and Mr. Dave Hogan (U.S. State Department, non-voting, designee).

A.3 Executive Director’s Report

Dr. Donald McIsaac reported on the following informational reports:

- Informational Report 1: Report on the Status of National Standard 2 Implementation (Northwest and Southwest Fisheries Science Centers, February 12, 2014);

- Informational Report 2: Bevan Series on Sustainable Fisheries, Free Public Symposium on Magnuson-Stevens Act; April 24-25, 2014; University of Washington. [Dr. McIsaac noted the symposium presenters included Congressman Doc Hastings, and Senator Mark Begich, and is focused on reauthorization issues for our geographic area.];
- Supplemental Informational Report 3: Request for Report Sent Out to Regional Councils *“Marine Cage Culture and the Environment: Twenty-first Century Science Informing a Sustainable Industry;”*
- Supplemental Informational Report 4: NOAA Fisheries: Regional Recreational Fisheries Action Agenda (2014-2015). [Dr. McIsaac noted the specific matters for the West Coast action agenda for recreational fishing activities.];
- Supplemental Informational Report 5: Council Coordination Committee Meeting Agenda for February 2014. [Dr. McIsaac noted Ms. Eileen Sobeck, Assistant Administrator for Fisheries, provided some remarks at the opening of the meeting and the reauthorization of the Magnuson-Stevens Act was a key agenda item.]; and
- Supplemental Informational Report 6: Letter to Eileen Sobeck from the Council Coordination Committee for Reconsideration of 2014 Funding Allocation.

Ms. Lowman reported on the National Electronic Monitoring Workshop held in January 2014 and noted the website which is available for more information (<http://www.eminformation.com>).

Dr. Cisco Werner and Dr. John Stein presented Informational Report 1: Status of National Standard 2 Working Group. [National Standard 2 concerns using the best scientific information available in Council decisions.] The presentation included discussion of the work of the National Standard 2 working group to document compliance by NMFS and the councils with the rule implementing National Standard 2 and actions to be completed by the NMFS working group and our Council by June 2014 (Agenda Item A.3, Supplemental NOAA Fisheries PowerPoint: Status of National Standard 2 Working Group).

In response to a question, Dr. McIsaac noted the Council Coordination Committee (CCC) had recommended the use of a joint Endangered Species Act (ESA) committee be adopted as a process throughout the country.

A.4 Agenda

A.4.a Council Action: Approve Agenda

Mr. Crabbe moved and Mr. Pollard seconded Motion 1 to adopt Agenda Item A.4: Proposed Council Meeting Agenda, March 2014. Motion1 carried unanimously.

B. Open Comments

B.1 Comments on Non-Agenda Items (3/8/2014 9:18 a.m.)

B.1.a Advisory Bodies and Management Entity Comments

None.

B.1.b Public Comment

Mr. Steve Bodnar, Executive Director, Coos Bay Trawlers Association, commented on the development of the outer continental shelf and the wind turbine in the Coos Bay area.

Mr. Ralph Brown, trawl fisherman, Brookings, Oregon, commented on the market for fisherman.

B.1.c Council Discussion and Comments as Appropriate

None.

C. Ecosystem-Based Management

C.1 California Current Ecosystem Report including Integrated Ecosystem Assessment (3/8/2014; 9:35 a.m.)

C.1.a Agenda Item Overview

Mr. Mike Burner presented the Agenda Item Overview and introduced the following documents:

- Agenda Item C.1.a, Attachment 1: Annual State of the California Current Ecosystem Report;
- Agenda Item C.1.a, Attachment 2: Annual State of the California Current Ecosystem Report Supplement (electronic only);
- Agenda Item C.1.a, Attachment 3: Integrated Ecosystem Assessment Summary Report; and
- Agenda Item C.1.a, Attachment 4: *California Current Integrated Ecosystem Assessment Report*. (Available only on the web at: www.noaa.gov/iea/CCIEA-Report/index.html).

C.1.b Reports and Comments of Advisory Bodies and Management Entities

Dr. Brian Wells and Dr. Chris Harvey presented Agenda Item C.1.a, Supplemental Science Center PowerPoint (IEA).

Dr. Cisco Werner and Dr. John Stein presented Agenda Item C.1.b, Supplemental Science Center PowerPoint (CCIEA).

Dr. Owen Hamel presented Agenda Item C.1.b, Supplemental SSC Report.

Mr. Mike Burner presented Agenda item C.1.b, Supplemental GMT Report.

Mr. Shems Jud presented Agenda Item C.1.b, Supplemental GAP Report.

Mr. Joel Kawahara presented Agenda Item C.1.b, Supplemental HC Report.

Mr. Mike Burner presented Agenda Item C.1.b, Supplemental SAS Report.

C.1.c Public Comment

Dr. Geoff Shester, Oceana, Monterey, California.

Mr. Ken Hinman and Ms. Teresa Labriola, Wild Oceans, Waterford, Virginia.

Mr. Tom Rudolph, PEW Charitable Trusts, Portland, Oregon.

Mr. Ralph Brown, trawl fisherman, Brookings, Oregon.

C.1.d Council Discussion

Mr. Lockhart expressed interest in starting to look at the ecological information in terms of discovering how it is impacting the fisheries, both from human and environmental standpoints. He is interested in how environmental anomalies, both good and bad, could be used as indicators to predict resulting good or poor years for the resource. This is a good start, but we are in an iterative process which will require us to come back and adjust things and explore the usability of the report information. He thought we may want to hire some outside expertise to assist in this. This tool is not just for us, but can be used by the fishermen as well.

Mr. Crabbe recommended we try to time these reports so the coastal pelagic species (CPS) team and advisors can be involved.

Ms. Culver agreed with the comments have been made and followed up on some specific things expressed in the Scientific and Statistical Committee (SSC) Report. The general Council guidance of limiting the report to about 20 pages was not nearly as important as having a report is useful for management. She was supportive of the SSC recommendations to look at sea birds and marine mammals other than sea lions, and establishing a structured process whereby the SSC Ecosystem Subcommittee could interact with the Integrated Ecosystem Assessment (IEA) Team on a regular basis. She would not support dropping the forage fish abundance. If there is a way they could explore other surveys may provide a better reflection of abundance for the Council's use, she would support that. The caveats on how to interpret the data were clear and useful, as was the recommendation to remove vessels from the well-being data that fish in Alaska. She would not want to see those vessels that fish both in Alaska and on the West Coast excluded from the reports.

Mr. Lockhart noted the comment concerning safety issues by the U.S. Coast Guard (USCG) representative and reported there was interest at the headquarters level of NMFS to look at the safety issue and National Standard 10. He offered to talk with the USCG and the science centers to see if we could explore a way to have safety concerns provided in a more explicit manner in the report next year.

Mr. Pollard expressed appreciation for the positive approach by everyone involved in this process and in moving this effort forward. Mr. Roth agreed and also expressed a desire to see further collaboration of the Council with the IEA Team, especially in developing reference points for forage indicator species.

D. Groundfish Management

D.1 NMFS Report (3/8/2014; 1:04 p.m.)

D.1.a Agenda Item Overview

Ms. Kelly Ames presented the Agenda Item Overview.

D.1.b Regulatory Activities

Mr. Lockhart noted the cost recovery program was implemented in mid-January and the Council might wish to have more information on the program at a future meeting. He introduced and commented on the following reports:

- Agenda Item D.1.b, Supplemental *Federal Register* Notices: Groundfish and Halibut Notices from 10/1/13 through 2/18/14; and
- Agenda Item D.1.b, Supplemental NMFS Report: Midwater Trawl Restrictions and Prohibited Species Retention for the Shorebased Trawl Individual Fishing Quota (IFQ) Program.

He noted the recent *Federal Register* notices that were not in the supplemental report. These included the proposed rule to modify regulations pertaining to certified observers and catch monitor providers, the proposed rule specifying the tribal whiting allocation of 17.5 percent of the total U.S. allowable catch for 2014, and a correction for the Program Improvement and Enhancement (PIE 2) regulations.

Mr. Lockhart also provided information concerning the problem of trawl quota share owners wishing to sell their shares being restricted on selling widow rockfish quota share until the Council makes a decision on reallocation of widow rockfish. NMFS is considering whether or not to consider an interim policy to resolve this issue and is requesting Council input. Another issue is in regard to future workload planning and the status of the midwater sport fishery proposal. The Council indicated a desire for NMFS to provide some analysis of the proposal at the April and June Council meetings. However, NMFS has not made progress on this and does not expect to make any in the near term. NMFS would like guidance from the Council on the priority for this item. Finally, Mr. Lockhart noted the possibility of a funding opportunity and expansion for the bycatch reduction engineering program. Up to \$2.5 million is available nationwide for pertinent proposals.

D.1.c Fisheries Science Center Activities

Dr. Michelle McClure and Dr. John Stein presented Agenda Item D.1.c, NMFS NWFSC Report and [Agenda Item D.1.c, Supplemental NWFSC PowerPoint](#): Groundfish Science Report.

D.1.d Reports and Comments of Advisory Bodies and Management Entities

None.

D.1.e Public Comment

None.

D.1.f Council Discussion

Council members asked Mr. Lockhart additional questions on the whiting research set asides, and rules regarding the federal catch monitors and observer safety changes. Dr. McIsaac clarified that questions on the observer coverage could be discussed under Agenda Item D.6.

D.2 Essential Fish Habitat (EFH) Evaluating Criteria and Phase 2 Report (3/8/2014; 1:57 p.m.)

D.2.a Agenda Item Overview

Mr. Kerry Griffin presented the Agenda Item Overview.

D.2.b Essential Fish Habitat Review Committee Report

Mr. Brad Pettinger presented Agenda Item D.2.b, EFHRC Report.

D.2.c Reports and Comments of Advisory Bodies and Management Entities

Dr. Michelle McClure presented Agenda Item D.2.c, Supplemental NMFS Science Center PowerPoint: NMFS Science Center Report: Evaluating Amendment 19 (describes Agenda Item D.2.c, Supplemental NW/SWFSC Report).

Ms. Michele Culver presented Agenda Item D.2.c, Supplemental WDFW and OCNMS Report.

Mr. David Sones commented on the effort to work together among the tribes in the Intergovernmental Policy Council to develop the letters supporting this agreement, including:

- Agenda Item D.2.c, Supplemental Tribal Report: Quinault Indian Nation Letter;
- Agenda Item D.2.c, Supplemental Tribal Report 2: Quileute Tribal Council Letter; and
- Agenda Item D.2.c, Supplemental Tribal Report 3: Makah Tribe Letter.

Ms. Lisa Wooninck presented Agenda Item D.2.c, Supplemental NMS Report: Office of National Marine Sanctuaries, West Coast Region Report.

Dr. Owen Hamel presented Agenda Item D.2.c, Supplemental SSC Report.

Mr. Rob Jones presented Agenda Item D.2.c, Supplemental GMT Report.

Mr. Brent Paine presented Agenda Item D.2.c, Supplemental GAP Report.

Mr. Joel Kawahara presented Agenda Item D.2.c, Supplemental HC Report.

D.2.d Public Comment (3/8/2014; 3:48 p.m.)

Agenda Item D.2.d, Public Comment: Natural Resources Defense Council and Oceana's submitted document.

Agenda Item D.2.d, Supplemental Public Comment 2.

Agenda Item D.2.d, Supplemental Public Comment 3.

Mr. Seth Atkinson, Natural Resources Defense Council, San Francisco, California.

Mr. Ralph Brown, Fisherman's Marketing Association, Brookings, Oregon.

Mr. Gary Greene, Moss Landing Marine Laboratories, Moss Landing, California.

Mr. Geoff Shester, Oceana, Monterey, California, presented Agenda Item D.2.d Supplemental Public Comment PowerPoint (Oceana).

Mr. David Kirk, Port San Luis Commercial Fisherman Association, Port San Luis, California.

Mr. Tom Rudolph, PEW Charitable Trusts, Portland, Oregon.

Mr. Greg Helms, Ocean Conservancy, San Diego, California.

Mr. Steve Bodnar, Coos Bay Trawlers Association, Coos Bay, Oregon.

D.2.e Council Action: Provide Guidance on Criteria for Evaluating the Effectiveness of Existing EFH Provisions and Consider Finalizing the EFHRC Phase 2 Report (3/8/2014; 4:42 p.m.)

Council members concurred in accepting the EFHRC Report (Agenda Item D.2.b). Ms. Lowman then asked for Council guidance on the criteria for evaluating the effectiveness of existing EFH provisions and recommendations for finalizing the EFHRC Phase 2 Report.

Mr. Myer agreed with the SSC in that what we do with EFH comes down to a policy choice. He believes that we shouldn't just stop with the closed areas under Amendment 19 with regard to determining whether we have adequately designated EHF. We need to use all of the relevant information we have to protect habitat. As noted by some of the public and in the Groundfish Advisory Subpanel (GAP) Report, we need to look at the effects of some of the gear changes on the habitat, in particular, the effect of changing the gear rope. There may be a way to quantify this as, suggested by Dr. McClure, by using the non-trawlable area as a proxy to determine what is being protected by the closed areas. Then, we need to go a bit beyond that to look at credits for Amendment 20. Fishermen are doing things differently now since the trawl rationalization went into effect in 2011. Enough time may have soon passed to estimate what those changes are with regard to protection of the habitat. He is not quite sure if there are any positive results available about the Rockfish Conservation Areas (RCA).

Ms. Culver and Ms. Lowman confirmed the guidance sought is for clarification of the additional analyses or products to come back in September (or for the next time we put this on our agenda), rather than guidance on specific proposals. With that understanding, Ms. Culver stated she would like to see the following come back to the Council in September:

- A map of the displaced or restored trawl effort from the trawl logbook data (Dr. McClure indicated that should be a quick data analysis).
- An analysis of the proposed new EFH conservation areas relative to the trawl logbook data to determine what percent the proposed new areas are of the current trawl area and the catch composition in aggregate of those proposed areas.
- The percentage of the catch by species that the proposed closed areas would represent.
- The overlap of the proposed closed areas to see if that can help us narrow the scope of proposals.
- A map of the proposed EFH conservation areas with an overlay of the area north of 46° 53' N. latitude and shoreward of 125° 44' W. longitude which is bounded on the north by the U.S.-Canada border. This area mimics the area in federal regulations for treaty Indian fisheries that are promulgated by the four Washington treaty coastal tribes.

Mr. Sones expressed concern the process of putting scientists and stakeholders in the same group was not the right choice to achieve the best outcome. He noted the minority reports reflect some of that concern. One of his biggest concerns is with the process and that members of the group are not working together. He believes there are proposals that are outside the scope of the intended purpose and the goal under Amendment 19. He is also concerned about Amendment 19 as it only focuses on the impacts of fisheries on EFH. He has great concern with the nearshore habitats and the non-fishing impacts to those habitats that we are not looking at. We made that mistake with the ESA and salmon in which the focus was on harvest and it took a long time to

get it back to habitat which was more important. While some of these issues are outside our jurisdiction, we can still influence the actions that need to be taken. We need to be focused on the big picture in a holistic view of the fisheries and the importance of nearshore habitat and non-fishing impacts. We can't look at things in isolation, but rather in combination, more along the lines of ecosystem management. He hopes we can come up with a better process in the future and can take a better view of what we are trying to do with EFH.

Mr. Wolford agreed with the GAP statement which identified that the main objective of protecting EFH was to maintain healthy fish populations and not to protect habitat for habitat's sake. Along with that, we need to know when we have done enough, though that may be hard to answer. Perhaps focusing on a cost-benefit analysis and evaluation, what does it cost us to protect habitat (lost fishing opportunity) compared to the positive impacts (more fish), would be the way to go. He would like to see an assessment of the costs and benefits for what we have already done with Amendment 19 as well as for the new proposals. He was supportive of the specific analysis that Ms. Culver requested and also thought the Council should consider the recommendations provided by Mr. Seth Atkinson which might put some quantification in the analysis. There was a call from the GAP and from Dr. Green that we need an independent scientific review of these things. Finally, Mr. Wolford would recommend forming a team to give us a solid, unbiased scientific review of what we have done and what we have on the table before us. In that way, the next time we consider this item we would have the information on benefits and costs from which we could determine further action. He asked the Council to move forward with determining the charge and make-up of the new review team.

Ms. Lowman suggested the Council finish with comments on the analysis and then take up the determination of who would be doing it.

Mr. Crabbe expressed some apprehension with including an analysis of the RCA as mentioned by Mr. Myer. Mr. Crabbe thinks the RCA is more of a resource protection measure that may have ancillary habitat benefits.

Mr. Myer noted he was conflicted about an analysis of the RCA and not a big proponent of analyzing it. He agreed with Mr. Crabbe's assessment of it.

As part of his guidance, Mr. Myer noted the review last year of the at-sea whiting data for midwater gear from Ms. Donna Parker. However, there wasn't any shoreside data. If possible, and if data is available, he would recommend an analysis of the whiting industry catch that occurred over the EFH and then, if possible, determine if there was any bottom contact or how many contacts were made. He noted at-sea data was available from the whiting coop and should be available for the shoreside fishery in the WCGOP data. This analysis might put the issue of bottom contact to rest.

Mr. Lockhart noted that, according to the COP, the Council's acceptance of the EFHRC Report adjourns the EFHRC. Therefore, he would anticipate that further work on any analyses would be likely to fall to science center personnel. If that is the case, he would have to confer with Dr McClure on workload issues. He also cautioned it is unlikely that any analysis will provide a clear-cut answer and that the decision on EFH will still be a policy decision. He questioned Mr.

Wolford as to whether his proposed review group would be composed of policy or scientific members.

Mr. Wolford clarified he was proposing a group to review the scientific aspects of the proposals.

Mr. Lincoln stated his support for the suggestions for analyzing the proposals. He didn't think we would need an independent analysis of the RCA. However, it would be informative to know what the intersection of the new proposals would be with the RCA, regardless of the purpose of the RCA. Mr. Crabbe agreed.

Mr. Buell cautioned the Council about viewing the RCA as a long-term habitat protection. He hoped there would come a day when the RCA could be reopened to fishing. He supported the proposed analyses and appreciated Mr. Sones' comments on the non-fishing impacts. Lastly, some of the advisory body statements asked for the identification of a clear problem statement or set of objectives. He thought a review of the objectives of Amendment 19 would be a reasonable starting place for determining how we could change EFH to meet those objectives.

Ms. Culver agreed with Mr. Buell regarding a review of the goals and objectives of Amendment 19. She requested NMFS WCR provide a range of options for the Council to consider in September regarding a process and timeline for the rulemaking process. One option could allow an implementation in 2016 and another in 2017 (identifying when final Council action would be required to meet these deadlines).

Mr. Myer clarified his request for an analysis of bottom contact for midwater trawl gear was in regard to areas closed to bottom contact.

Mr. Lockhart asked for clarification on the requested analyses—whether it was for the questions raised by the proposals or on the proposals themselves

Ms. Culver responded the states would expect to be involved in the analyses of the alternatives as they were during Amendment 19. The Groundfish Management Team (GMT) and advisory bodies would also be engaged in the review. She did not expect any analysis of the proposals themselves between now and September. The suggestions and information identified in this meeting would be brought back in September to help define the scope and structure of the alternatives and then we would expect the analysis to occur on the alternatives that we define.

Mr. Wolford stated his support for using the Council advisory bodies, states, and NMFS personnel to form a team to review the issues. He had hoped an analysis of the proposals could also be accomplished, but recognized the timeframe may not allow it. He would be happy if all we got was the team and the criteria for what we were going to analyze.

Mr. Lincoln thought the direction the Council was going for September was to have more information on the proposals, how they intersected, and what data was available for analysis so we could better construct the actual alternatives for analysis.

The Council appeared to agree with this direction and Ms. Lowman indicated the Council would not form a team at this point and rely primarily on the science centers to provide the information for September.

D.3 Consider Barotrauma Device Morality Rates (3/9/2014; 2:36 p.m.)

D.3.a Agenda Item Overview

Mr. John DeVore presented the Agenda Item Overview.

D.3.b Reports and Comments of Advisory Bodies and Management Entities

Agenda Item D.3.b, GMT Report: Groundfish Management Team Report on Proposed Discard Mortality for Cowcod, Canary Rockfish, and Yelloweye Rockfish Released Using Descending Devices in the Recreational Fishery.

Mr. John Budrick presented Agenda Item D.3.b, Supplemental GMT Report 2.

Dr. Owen Hamel presented Agenda Item D.3.b, Supplemental SSC Report.

Mr. Louis Zimm presented Agenda Item D.3.b, Supplemental GAP Report.

D.3.c Public Comment

Mr. Tom Marking, Fisherman, McKinleyville, California.

D.3.d Council Action: Approve Bycatch Mortality Rates Associated with Barotrauma Reduction Devices in Groundfish Fisheries

Mr. Pollard stated the Council action was to consider whether to adopt barotrauma estimates and methods different from those adopted in April 2013, and to confirm or alter the decision to use the 90 percent confidence interval estimates.

Ms. Culver and Mr. Wolford asked some technical questions of Dr. Hamel to clarify the SSC's recommendations with regard to choices of data and modeling, especially with regard to how uncertainty was handled and the choices for the mortality rate for cowcod.

Mr. Wolford moved and Mr. Brizendine seconded Motion 4 that the Council approve the discard mortality rates for cowcod, canary, and yelloweye as shown in Table 1, page 2 of D.3.b, Supplemental GMT Report 2 (March 2014), using the 75 percent confidence interval.

Mr. Wolford stated the SSC and GMT have done a good job of addressing the uncertainties and questions about our previous actions last April. Both the SSC and GMT have used the best available science and the sample sizes have been increased and included in the new table. As new data comes along we should be able to incorporate it in the table as well. The Council's consideration has included and accounted for all of the various sources of uncertainty and with appropriately calculated confidence intervals. Based on our discussions with the GMT and SSC it is clear this is a very conservative approach. The 75 percent confidence interval in the current table is not that different from where we were at the 90 percent confidence interval from last April. Last April the 90 percent confidence interval gave us rates roughly in the range of 20 to 45 percent. The 75 percent confidence interval provides a range approaching 20 to 50 percent. The 75 percent level of confidence is a good place to be. We are right much more often than we

are wrong at that level. As more data comes along, the confidence intervals should shrink. Sometime in the future we may wish to look at a tighter confidence interval. He noted the comments by Mr. Zimm that in order to get the fishing public to do this, they must perceive there is some benefit to do it. An appropriate accounting and rates at the 75 percent confidence interval should help provide that incentive.

Mr. Buell spoke in support of the mortality credits and noted the confidence interval is a risk determination for the Council to choose. As more data comes in the confidence intervals should shrink and the Council can make the decision about the risk in the future as is appropriate. Hopefully, more species can be added in the future.

Ms. Culver spoke in support of the comments and supports the use of descending devices to aid the survivability of all rockfish. WDFW has reached out to our fisheries community and have educated angler groups toward the purchase of descending devices. The response is overwhelmingly positive and will certainly help in the recovery of those overfished stocks.

Ms. Culver moved and Mr. Lincoln seconded Amendment 1 to Motion 4 to change the 75 percent confidence interval to the 90 confidence interval.

Ms. Culver stated she was also supportive of using the more recent data of 2013 and keeping the data updated in an adaptive management approach which includes new data as it becomes available.

Ms. Lowman asked for a sense of how and how often the data might be updated.

Mr. DeVore said it depends on when research becomes available that compels a change and the Council's workload priorities.

Mr. Wolford asked what portion of the point estimates are based on studies of yelloweye and canary rockfish.

Mr. Budrick responded it varies by depth bin. The studies conducted by ODFW were intended to sample yelloweye and canary, so those two species make up a large proportion of the samples in the 10 to 30 fathom depth bin and to some degree the 30 to 50 fathom depth bin. He proceeded to list the various sample numbers which confirmed there were significant numbers of canary and yelloweye rockfish in the proxy estimates for those species, especially yelloweye in the 10 to 30 fathom depth bin.

Mr. Wolford concluded there was a preponderance of yelloweye and canary rockfish in the studies that went into the proxy mortality estimates for those species. That may not be true for cowcod except for the deepest bin. However, the SSC stated the mortality for cowcod in that bin was too good (low) and to use the higher values from the shallower bins. From his perspective, Mr. Wolford thought the proxies are very conservative and he is very comfortable with the way the point estimates were made with all the additional buffers. He thought the 75 percent confidence interval was more than adequate to provide a comfortable position from which to operate.

Mr. Lockhart agreed with Ms. Culver's statement that more people will do this because it is the right thing to do than because they will get something out of it. Everybody hates to throw over a fish that is just going to die. He still has concerns about how this is applied and used on a daily basis. There is the possibility of individuals not correctly applying the techniques that result in the estimated mortalities in the studies. He feels more comfortable with the 90 percent confidence level until we get more information and determine how it is actually working and used. Additionally, the range within the confidence intervals will change as we get more data. He supports the amendment.

Mr. Buell noted his understanding that the estimates are independent by depth bin and there is no canary or yelloweye in the deepest depth bin where the confidence interval makes a big difference. He believes that is why some caution is warranted.

Ms. Grebel stated she feels comfortable using the 75 percent confidence interval based upon the discussion today. The SSC didn't have time to discuss going back to recalculate the cowcod values in the shallower depth bins and as an interim step recommended applying the higher rates to the deeper depth bin. Also, the 90 percent confidence interval for cowcod in the 20 to 30 fathom depth bin has a 52 percent mortality assigned which is the same as the higher surface rate. There are still some questions she has with the 90 percent interval. She is comfortable with 75 percent and hasn't heard anything from the SSC or other advisory bodies that suggest a need for a more conservative standard.

Mr. Ortmann expressed his support of the amendment and recognized the key role of Mr. Wolford in getting this issue in front of us.

Mr. Crabbe expressed his support for the 75 percent interval given the unlikely result of the 90 percent interval indicating there isn't a credit for using the descending device.

Ms. Culver asked for further clarification about the substitution of the surface mortality rate for the greater depths for cowcod.

Mr. Budrick responded he believes the point of confusion is with regard to the reason for supplanting the estimate previously occupying the 90 percent confidence interval estimate for the 20 to 30 fathom depth bin for cowcod with the surface mortality estimate. The reason is that with the buffering under the 90 percent confidence interval estimate, the mortality rate resulting from the application of that buffer exceeded the surface release which defies our understanding of the nature of the mortality when a descending device is used. This would indicate potentially that the buffer is so high that the mortality observed is in excess of surface mortality. Therefore it was replaced with the surface mortality rate.

Mr. Wolford stated that does go to show how much buffering there is in these confidence intervals.

Amendment 1 carried 8 yes, 5 no (Mr. Wolford, Ms. Grebel, Mr. Feldner, Mr. Brizendine and Mr. Crabbe voted no).

Motion 4 (as amended) carried unanimously.

Mr. Buell reminded the Council of the need to confirm their direction to the RecFIN Technical Committee to review the implementation methods for applying mortality rates brought forward by each state and to confirm Council intent to begin accounting for the use of descending devices in estimates retrospectively for 2013 and 2014, and forward into the future. The Council indicated concurrence.

D.4 Consideration of Inseason Adjustments, Including Carryover (3/9/2014; 4:11 p.m.)

D.4.a Agenda Item Overview

Ms. Kelly Ames presented the Agenda Item Overview

D.4.b Reports and Comments of Advisory Bodies and Management Entities

Mr. Bob Leos presented Agenda Item D.4.b, Supplemental GMT Report.

Mr. Gerry Richter presented Agenda Item D.4.b, Supplemental GAP Report.

D.4.c Public Comment

None.

D.4.d Council Action: Adopt Recommendations for Adjustments to 2014 Groundfish Fisheries, Including Carryover

Mr. Lockhart stated he anticipates surplus carryover will be issued for most species. There are two species, sablefish north of 36° N. latitude and petrale sole that need further analysis before a determination is made. As the GMT statement noted, the final data for these species will be available sometime in early April and NMFS intends to make a determination as quickly as possible. NMFS would take into consideration any guidance from the Council at this meeting.

Mr. Myer and Mr. Buell recommended that, when the numbers are known, NMFS recommend carryover of the full amount. Mr. Buell also stated this should be a routine action in the future that would not need work by the GMT and would help to lighten their future workload. Mr. Pollard agreed.

Mr. Wolford asked for information on why the GMT has needed to take on this workload.

Ms. Ames replied when the carryover program was first implemented in 2012, NMFS requested more information and analysis on the carryover process. The final guidance from NMFS was that there needed to be an evaluation of the risk of issuing surplus carryover to exceeding the annual catch limit (ACL) and overfishing limit (OFL). Right now we are stuck in the annual process of evaluating that risk. Also, for the 2015-2016 specifications cycle, we have a management measure to look at different ways of projecting the issuance of surplus carryover. This is also on the list for the June 2014 management measure considerations for a long-term solution to the carryover problem. For now, we are on an interim, annual approach for making the risk assessment until we find another approach through the biennial process or another long-term solution.

Ms. Culver stated the work that went into the GMT report was very helpful and she would not want the Council to go without an opportunity to provide recommendations to NMFS on the issuance of carryover. She thinks it is an important component of the program. It is not an automatic thing, it is a privilege, and it is up to the Council and NMFS whether to issue carryover and for which species. It has a maximum amount of 10 percent, but that is not an automatic given. If the GMT didn't take the time to produce this report in order for the Council to convey a recommendation to NMFS with backup information, we could be in a situation where NMFS would make that decision without the recommendation of the Council.

Ms. Ames stated it was the goal of the GMT to provide their assessment for carryover earlier so that it would not have to take up Council floor time.

Mr. Myer moved and Ms. Lowman seconded Motion 5 to recommend NMFS issue the surplus carryover in the shorebased IFQ program from 2013 to 2014 based on preliminary data for all non-whiting IFQ species, including sablefish north of 36° N. latitude and petrale sole; and to release the full amount up to 10 percent.

Mr. Myer stated the GMT Report laid out the issues very well. For sablefish and petrale we are now tracking at 89 percent of the 2013 numbers, so there is plenty for carryover. If we look at the projections for all the other species we see that they are tracking well below the 80 percentile. The projected 2014 ACLs for sablefish and petrale are at about 92 percent. If you add the carryovers into those numbers it would go up to about 94 percent. All the other species are tracking well below those levels. I think the data clearly supports a carryover.

Ms. Lowman agreed this is a strong rationale. While the fishery is doing better, there is need for more improvement and the carryover is important from an economic perspective.

Motion 5 carried, Mr. Lockhart abstained.

D.5 Biennial Harvest Specifications for 2015-2016 and Beyond Groundfish Fisheries (3/10/2014; 8:58 a.m.)

D.5.a Agenda Item Overview

Mr. John DeVore and Ms. Kelly Ames presented the Agenda Item Overview and introduced the following attachments:

- Agenda Item D.5.a, Attachment 1: Proposed Overfishing Limits for Cowcod South of 40°10' N. latitude, the Oregon and Washington Substocks of Kelp Greenling and the Washington Substock of Cabezon;
- Agenda Item D.5.a, Supplemental Attachment 2: Adopted Harvest Schedule for Developing the 2015-2016 and Beyond Groundfish Harvest Specifications and Management Measures;
- Agenda Item D.5.a, Supplemental Attachment 3: MSA - SEC 306 State Jurisdiction; and
- Agenda Item D.5.a, Supplemental Attachment 5: Excerpt from the fishery management plan (FMP).

Mr. Devore presented Agenda Item D.5.a, Supplemental Revised Attachment 4: Overview of the 2015 and Beyond Biennial Specifications Process: Progress to Date on the environmental impact statement (EIS) and a Highlight of Select Management Issues (PowerPoint Presentation).

**D.5.b Reports and Comments of Advisory Bodies and Management Entities
(3/10/2014; 10:47 a.m.)**

Dr. Owen Hamel presented Agenda Item D.5.b, Supplemental SSC Report.

Ms. Heather Reed presented Agenda Item D.5.b, Supplemental GMT Report.

Mr. Gerry Richter presented Agenda Item D.5.b, Supplemental GAP Report.

Mr. Frank Lockhart presented Agenda Item D.5.b, Supplemental NMFS PowerPoint: NMFS Analysis Recommendations.

Ms. Michele Culver presented Agenda Item D.5.b, Supplemental WDFW/ODFW/CDFW Report and Agenda Item D.5.b, Supplemental WDFW Report.

Mr. Troy Buell discussed the Oregon fishery regarding the authority of states to manage the fisheries that do not occur predominately in Federal waters. The agency works towards the management and analysis and limits of these fisheries.

Ms. Joanna Grebel discussed the California fisheries with regard to the new data moderate approach and removing stocks from the FMP. She expressed concern with the process and their ability to react to information as it occurs without the Council management of these species.

D.5.c Public Comment

Mr. Steve Bodnar, Coos Bay Trawlers Association, Coos Bay, Oregon.

Mr. Brad Pettinger, Oregon Trawl Commission, Brookings, Oregon.

Mr. Jeff Lackey, Fisherman, Newport, Oregon.

Mr. Daniel Platt, Fisherman, Fort Bragg, California.

Mr. Rod Moore, Westcoast Seafood Processors Association, Portland, Oregon.

D.5.d Council Action: Adopt Final Remaining Overfishing Limits, and Receive Update on the Status of the National Environmental Policy Act (NEPA) Document (3/10/2014; 2:44 p.m.)

Mr. DeVore reviewed the process for selecting the OFL's for the stocks.

Ms. Grebel moved and Mr. Crabbe seconded Motion 7 for the Council to adopt the OFL for cowcod south of 40° 10' N. latitude as referenced in Agenda Item D.5.a, Attachment 1, Table 1.

Ms. Grebel stated the SSC recommended this new approach (doubling the ACL) for calculating the cowcod OFL for the unassessed portion of the stock north of Point Conception as representing the best available science at this time.

Motion 7 carried unanimously.

Ms. Culver moved and Mr. Lincoln seconded Motion 8 for the Council to adopt the OFL for kelp greenling off of Washington for 2015 of 31.4 mt and an OFL for 2016 that corresponds to a P*

value of 0.4; and approve the acceptable biological catch (ABC) for kelp greenling off Washington for 2015 and 2016 corresponding with a P^* value of 0.4.

Ms. Culver stated the SSC Supplemental Report endorses the OFL's for kelp greenling off of Washington as shown in Table 2 of D.5.a, Attachment 1. Further, the SSC Groundfish Subcommittee statement states that this OFL estimate should not be used beyond the 2015-2016 management cycle. In the past, the Council has used a P^* of 0.4 as a guideline for category 3 stocks to build in some additional precaution in our overfishing probability. So, in dealing with a data moderate stock assessment and a category three stock, she thought it appropriate to approve a P^* of 0.4 rather than 0.45.

Motion 8 carried unanimously.

Mr. Buell moved and Mr. Feldner seconded Motion 9 for the Council to adopt an OFL for kelp greenling off of Oregon for 2015 of 14.0 mt and a P^* value of 0.45; an OFL for 2016 of 15.5 mt with a P^* of 0.45; and a 2015-2016 ABC that correspond to a P^* of 0.45.

Mr. Buell stated the SSC has determined these parameters to be the best available science at this time. Regarding the P^* of 0.45, which differs slightly from that adopted off of Washington, he believes that the sigma value captures a lot of the uncertainty so he is comfortable with leaving the P^* value at 0.45.

Ms. Culver stated she supports the motion and the P^* value of 0.45 off of Oregon. There has been a full assessment of kelp greenling off of Oregon while there has not been one off of Washington. She thought there is greater uncertainty off of Washington. Mr. Buell agreed with her point.

Motion 9 carried unanimously.

Dr. McIsaac directed the Council that this portion of the agenda item is not about making a decision for exactly what the 2015-2016 specifications process for a January 1 start would be. It is rather an opportunity to get Council input on what might need to be assessed and included in this process and the analytical document to prepare for the April and June meetings with the hope of avoiding the need for an emergency rule.

Mr. Lockhart clarified what was done in November with regard to the analyses required for the 2015-2016 process (further analyze alternatives 1 and 2 for complex restructuring, and analyze and consider separating blackgill, shortraker and rougheye rockfish species from the minor slope north and south complexes for individual or subcomplex management). He suggested a willingness to try to simplify these requests to help avoid the need for a delayed opening or emergency rule.

The Council had considerable discussion on the difficulties of meeting the specifications schedule and the January 1 start date. The difficulties included timing of the state's stakeholder meetings without harvest guidelines being available, using the GAP to set rougheye and shortraker allocations, sufficient time to look at the issues of data-poor stock assessments and conservation concerns where the species aren't lining up, rushing through the process, asking the

GMT to make last minute data analyses for Council decisions, doing things in a piecemeal manner, and the significant problems of resolving the issues for the nearshore fisheries in time for a January 1 start date. Council members identified various needs and approaches to accomplishing the necessary tasks to keep the specifications cycle on schedule and to guide the action at the April Council meeting.

D.6 Trawl Rationalization Trailing Actions (3/11/2014; 8:11 a.m.)

D.6.a Agenda Item Overview

Mr. Jim Seger presented the Agenda Item Overview and introduced the following attachments for reference:

- Agenda Item D.6.a, Attachment 1: Glacier Fish Company LLC vs. Pritzker and Plaintiffs' Appeal on Pacific Dawn II; and
- Agenda Item D.6.b, Supplemental NMFS Report 2: *Federal Register* Notice Dated February 19, 2014 – Proposed Rule: to revise the Pacific Coast Groundfish Fishery regulations pertaining to certified catch monitors and certified observers required for vessels in the Shorebased IFQ Program, the Mothership Coop Program, the Catcher/Processor Coop Program, and for processing vessels in the fixed gear or open access fisheries.

D.6.b Reports and Comments of Advisory Bodies and Management Entities

Mr. Frank Lockhart presented Agenda Item D.6.b, Supplemental NMFS Report: Report on the Adaptive Management Program for the Trawl Rationalization Program and referenced Agenda Item D.6.b, Supplemental NMFS Report 2: *Federal Register* Notice dated February 19, 2014 – Proposed Rule: to revise the Pacific Coast Groundfish Fishery regulations pertaining to certified catch monitors and certified observers required for vessels in the Shorebased Individual Fishery Quota Program, the Mothership Coop Program, the Catcher/Processor Coop Program, and for processing vessels in the fixed gear or open access fisheries.

Mr. Brian Corrigan presented Agenda Item D.6.b, Supplemental EC Report.

Ms. Kelly Ames presented Agenda Item D.6.b, Supplemental GMT Report.

Mr. Kevin Dunn presented Agenda Item D.6.b, Supplemental GAP Report.

D.6.c Public Comment

None.

D.6.d Council Action: Provide Guidance on Implementation and Adaptive Management Program Pass-Through

Mr. Wolford had a number of comments concerning the observer requirements in the *Federal Register*. He believes the proposed regulations go far beyond what he had anticipated seeing for the requirements to become a provider and observer. He noted the following points (referencing Agenda Item D.6.b, Supplemental NMFS Report 2):

- Relative to becoming a provider (page 9597, paragraph 660.111) – this is overly restrictive on who could be a provider (excludes public agencies such as the city or county of Monterey) and goes far beyond what the Council intended to see.
- Page 9600 - limited conflict of interest for catch monitors (paragraph 3(A)) – doesn't seem to be restricted to commercial fishing and appears that it could exclude a recreational fisherman and other non-commercial fishing entities from becoming catch monitors. This same language appears in several other places in the notice.
- Page 9604 – paragraph (5)(B)(3) on the qualifications of an observer, requires a basic pulmonary resuscitation first aid course prior to the end of the training class. It is great to be CPR trained, but what does it have to do with being an observer.

Mr. Wolford noted several other places in the notice which contained what he believes are overly restrictive requirements (e.g., one requires holding a first aid certification, not just having gone through the training).

Mr. Crabbe had questions about observer or provider obligations. If an observer opted not to get on a vessel for any reason, what are the steps that would be taken in getting information back to the vessel, and how long would it take?

Mr. Lockhart asked to defer that question to Dr. McClure

Dr. McClure noted that NMFS has much more control over reporting in the non-catch-share versus the IFQ observer programs. In the non-catch-share observer program, there is an immediate record of an observer's refusal to board a vessel (or his request upon return to port of being unwilling to again board that vessel) that is forwarded to the Office of Law Enforcement (OLE) and the USCG. When an observer refuses to board a vessel in the IFQ fishery, the observer reports to the observer provider who notifies NMFS. However, in the case of an observer coming back to port and not being willing to ever reboard that same vessel, the process is much more informal and NMFS may never get the report. That is part of the reason for the more restrictive language in the proposed rule requiring a report to OLE and the USCG. Dr. McClure stated she is not aware of any language in the rule that puts a time requirement on the vessel owner receiving the report.

She noted the observer provider is supposed to notify the OLE and USCG within 24 hours. (Mr. Farrell later found the *FEDERAL REGISTER* requires any refusal to board to be immediately reported to the observer provider and the OLE.)

Mr. Wolford wondered about any compensation for the fishermen for a delayed trip, recognizing the potential cost of the delay.

Dr. McClure replied there was none and noted that in the entire history of the observer program, which includes 2,000 to 3,000 trips observed every year, there have only been 4 refusals to board.

LCDR Casad asked for Dr. McClure to speak to the nature of the relationship between the vessel and observer provider.

Dr. McClure stated that, in the IFQ fishery, it is a contractual relationship.

LCDR Casad spoke to the USCG role and agreement in working with NMFS to ensure the safety of the observer program and vessels. Any reports from observers concerning the safety of the vessels are distributed down to the level of the captains or the ports who are responsible for the vessel safety in their ports.

Mr. Crabbe emphasized the important question was a reasonable length of time between when a report is made and when the vessel owner or operator receives the report so that he can rectify any problems. That needs to be built into the process.

Dr. McClure stated at this time there isn't a time frame specified in the process. NMFS can release the vessel safety data, but it would probably be better to use the USCG procedures. Also, it might be possible to have these elements built into the contract between the vessel and observer provider if either party were concerned about timeliness.

Ms. Culver recounted her experience with the WDFW-run observer program and the need to work with fishermen and observers from both sides of the issues. She wondered if the proposed rule allows for the state agencies to provide observers, or if they were precluded from providing that service.

Mr. Lockhart reported the proposed rule would preclude the states, cities, and academic institutions from becoming providers.

Mr. Wolford noted another issue with the proposed rules on page 9609 with regard to the very extensive, restrictive, and special educational requirements to qualify as an observer candidate.

Mr. Pollard suggested based on the comments here, staff could draft a letter for Council members to review.

Mr. Myer noted in drafting the comments staff should be cognizant of the full regulations, as there were specific definitions for many of the items that Mr. Wolford was concerned about (e.g., the definitions of "processor" and "fish processing" are very specific and would not include recreational fishing activities).

Mr. Lockhart noted the Council might not need to draft a letter. NMFS has heard the Council comments here today and could take those, and any others provided directly to him by individual Council members, as public comment before final rule.

The Council concurred in Mr. Lockhart's approach, noting the need to take into consideration the difference between national guidelines and national regulations

Mr. Matthews reported on an incident of vessel safety that went through the OLE process (there has been only one complaint out of 7,500 deliveries in the IFQ program). Basically, the complaint followed the procedures outlined in the contract between the vessel owner/operator and observer provider. The OLE and USCG were notified by the observer provider that the vessel had 30 days in which to comply with obtaining a safety review and certification by the

USCG or the contract would be terminated. The vessel owner did not follow through with the inspection and the contract was cancelled.

In response to a question from Mr. Seger, Mr. Pollard confirmed the Council had identified its concern over the tight conflict-of-interest regulations and a desire to make those more realistic.

Mr. Seger introduced the topic of the Pacific whiting season start date. He noted Agenda Item D.1.b, Supplemental NMFS Report, outlined a number of items to be included in the whiting clean-up rule that NMFS has proposed to move ahead of the whiting season rule. He referred Council members to comments by the GMT, GAP, and Enforcement Consultants (EC) concerning the timing of the comment period, how this rule might affect the whiting season start date (NMFS indicated it would not delay it), and the 50 percent rule for determining what is a whiting trip.

Ms. Culver stated that, depending on how the draft rule is written, WDFW would have some concerns about the disposition procedures for prohibited species and for salmon in particular. To the extent that NMFS is relying on state employees to aid in that disposition, we need to know what the expectations are to determine if we can meet them. We also have concerns about using the 50-percent-or-more-whiting-by-weight rule for the definition of a whiting trip. Under the IFQ fishery, in which all shoreside permit holders receive whiting IFQ, she could see a situation where it would not really be a whiting trip under that definition. She could see similar conflicts for IFQ midwater trawl fishing and the allowance to fish within the RCAs. It would be appropriate for the GMT and GAP to review the proposed rule language which could happen if the comment period overlaps a Council meeting. She recommends having some preliminary discussions prior to the proposed rule.

Mr. Lockhart indicated the NMFS goal would be to have the rulemaking comment period extend through a Council meeting, but noted that there might be limits due to the preliminary meetings due to budget restrictions.

Dr. McIsaac wondered if June might be the time to see the regulations and have an environmental assessment (EA) for the GMT and GAP to look at without risking a delay in the implementation. He noted June or September appeared to be the only candidates that might meet the schedule. Mr. Lockhart agreed and stated his intent to advise the Council in April of the best meeting candidate.

Ms. Kirchner suggested separating the two actions, if necessary, to avoid delaying the whiting start date. Mr. Lockhart stated he did not see a problem with accomplishing both actions with no delay to the whiting season.

Mr. Seger stated the Council action now was to adopt some alternatives for analysis on the adaptive management program (AMP) pass through and to take final action on this issue at the June meeting.

Mr. Pollard thought the option to consider was the one for 2017 or open ended one.

Ms. Lowman moved and Mr. Ortmann seconded Motion 10 that the Council adopt for analysis the alternatives shown in Agenda Item D.6., Situation Summary:

- No Action Alternative (Status quo): Beginning in 2014, the quota pounds (QP) associated with the quota share QS set-aside for adaptive management program (AMP) purposes will be distributed in accordance with procedures developed under the AMP provisions. If such procedures are not developed and implemented by January 1, 2014, there is no guidance on how the AMP QP will be distributed.
- Strawman Alternative 1: The pass-through procedures used since 2011 will be continued through 2017.
- Strawman Alternative 2: The pass-through procedures used since 2011 will be continued until procedures are developed under the AMP.

In response to some questions and concerns regarding the details in the motion, Ms. Lowman withdrew her motion with the consent of the second.

Ms. Lowman moved and Mr. Ortmann seconded Motion 11 that the Council adopt for analysis the following alternatives:

1. No Action Alternative (Status quo): Beginning in 2015, the QP associated with the QS set-aside for AMP purposes will be distributed in accordance with procedures developed under the AMP provisions.
2. Alternative 1: The AMP QP allocation procedures will be considered as part of the five-year review and the pass-through procedure used since 2011 will be continued
 - a. Sub-option A: through 2017.
 - b. Sub-option B: Until the implementation of regulations resulting from the five-year review.
3. Alternative 2: The pass-through procedures used since 2011 will be continued until procedures are developed under the AMP.

Ms. Lowman stated that in order to bracket the options, Alternative 1 has two sub-options. One sub-option has a date certain (2017) and the other has until implementation of regulations from the five-year review. Since we don't know when that would be, this may help reduce workload planning issues.

Motion 11 carried unanimously.

Mr. Seger summarized Council action under this agenda item. He stated the Council had 1) a discussion of the proposed observer catch-monitoring rule that covered a number of points for NMFS to take into account in their final rule, 2) requested NMFS to have the open public comment period for the proposed whiting clean-up rule to extend over a Council meeting, and 3) adopted the alternatives for the AMP to be considered for final action at the June Council meeting.

E. Habitat

E.1 Current Habitat Issues (3/9/2014; 8:04 a.m.)

E.1.a Agenda Item Overview

Ms. Jennifer Gilden presented the Agenda Item Overview and introduced:

- Agenda Item E.1.a, Attachment 1: Letter on KZO Sea Farms; and
- Agenda Item E.1.a, Attachment 2: Background information on Pacific Marine Estuarine Fish Habitat Partnership (PMEFHP).

E.1.b Report of the Habitat Committee

Mr. Joel Kawahara presented Agenda Item E.1.b, Supplemental Habitat Committee Report.

E.1.c Reports and Comments of Advisory Bodies and Management Entities

Mr. George Kautsky presented Agenda Item E.1.c, Supplemental Tribal Report of Hoopa Valley Tribe.

Mr. Mark Gorelnik and Mr. Dave Bitts presented Agenda Item E.1.c, Supplemental SAS Report.

Ms. Jennifer Gilden presented Agenda Item E.1.c, Supplemental CPSAS Report.

Mr. Phil Anderson provided information for Wanapum Dam on the Columbia River.

E.1.d Public Comments

Agenda Item E.1.d, Public Comment.

Agenda Item E.1.d, Supplemental Public Comment 2: Correspondence from Gary Shilling Regarding Ballast Water Treatment.

Mr. Duncan MacLean, Fisherman, Half Moon Bay, California.

E.1.e Council Action: Consider Habitat Committee Recommendations

Mr. Feldner recommended the Council submit the letter on the KZO Sea Farms with one additional paragraph to cover responsibility for indemnity and recovering accidentally lost equipment or parts of the project. The staff could develop the exact language.

Ms. Yaremko supported the letter regarding the KZO Sea Farms and the Coastal Pelagic Species Advisory Subpanel (CPSAS) remarks recommending the establishment of a policy framework for aquaculture and other offshore development that could be applied to any case that comes up in the future. The letter clearly establishes the Council's role in the project and articulates our priorities and concern with regard to fisheries management, EFH, and habitat areas of particular concern. Ms. Yaremko also supported the addition of the indemnity clause recommended by Mr. Feldner. She noted that issue was contained in policy point #5 in the CPSAS Report. She also supported the minor changes recommended in the Habitat Committee (HC) Report.

Regarding the Pacific Marine Estuarine Project, Ms. Yaremko reported she was encouraged by the report and discussion provided by the HC which indicated the emphasis was on data inventory information that may better inform us on EFH and potential stock assessments. Her initial concern was in the possible overlap of effort or redundancy with the Council's forage and

ecosystem initiatives. The HC report has clarified the complementary, rather than competing nature of this other effort.

Ms. Yaremko stated she looked forward to further updates and implementation of the drought contingency plans with regard to release of juvenile fall Chinook from Coleman National Fish Hatchery.

Mr. Wolford was encouraged by the Coleman Hatchery fish release contingency planning. Regarding the Bay/Delta Conservation Plan, he noted it posed a very serious threat to fisheries, especially salmon, and we have a strong need to comment on it. Few believe it is a real fisheries conservation plan. It diverts water out of the Sacramento River before it gets to the delta, which will have many deleterious impacts. Fortunately, there is an EIS and environmental impact review out for public review and a comment period extending through the end of June. He would like to have the HC take a serious look at the Bay/Delta Conservation Plan and provide a strong draft comment letter for the Council to consider for submission in April. He noted the habitat mitigation proposed in the plan was not funded and not likely to happen.

Ms. Lowman confirmed Council consensus for the HC to draft the comment letter for April on the Bay/Delta Conservation Plan.

The Council had considerable further discussion of contingency planning for juvenile fish releases at Coleman National Fish Hatchery with details provided by Mr. Roth. He especially noted the difficulty of trucking that many fish as far as is needed and the logistics that would be required, while at the same time meeting the important goals of minimizing straying of adults, maintaining genetic integrity, and providing ocean and inriver fisheries.

Mr. Wolford recommended the Council submit a letter to the USFWS recognizing the uniqueness of this particular year and assessing the merits of the draft plan. While the contingency is a necessity for this year, elements of the plan may well serve as a template for future years if similar conditions arise.

Ms. Lowman confirmed Council consensus for having Council staff write a letter to the USFWS on their contingency planning prior to the April Council meeting. Mr. Roth agreed to provide the details of the plan for the April briefing book.

F. Salmon Management

F.1 Review of 2013 Fisheries and Summary of 2014 Stock Abundance Forecasts (3/9/2014; 9:23 a.m.)

F.1.a Agenda Item Overview

Mr. Mike Burner presented the Agenda Item Overview and referenced Agenda Item F.1.a, Attachment 1: Excerpts from Chapter 3 of the Pacific Coast Salmon Fishery Management Plan.

Dr. Robert Kope highlighted *Review of 2013 Ocean Salmon Fisheries and Preseason Report I: Stock Abundance Analysis and Environmental Assessment Part 1 for 2014 Ocean Salmon Fishery Regulations*.

F.1.b Reports and Comments of Advisory Bodies and Management Entities

Dr. Owen Hamel presented Agenda Item F.1.b, Supplemental SSC Report.

Mr. Sones noted the tribes have some differences with WDFW in regard to the age-2 Chinook recruit scalars used for mid-Puget Sound fall fingerlings in the Chinook FRAM. The scalars currently used in the FRAM are from 2008. The tribes have updated them to 2014 to provide better estimates. The tribes request the Salmon Technical Team (STT) use the updated scalars in the FRAM and provide a model run using scalars for unmarked fish of 0.6541 and for marked fish a scalar of 2.2270. The tribes will continue to work with WDFW to resolve this difference.

Mr. Anderson asked to include Agenda Item F.1.b, Supplemental WDFW Report under Agenda Item F.2.

F.1.c Public Comment

None.

F.1.d Council Action: Review and Discuss Relevant Fishery Information; Act on Relevant Status Determinations, and Adopt 2014 Abundance Forecasts and Annual Catch Limits as Necessary

Mr. Pollard moved and Mr. Anderson seconded Motion 2 that the Council adopt the 2014 stock abundance forecasts, ABCs, and ACLs as shown in Supplemental Preseason Report 1, February 2014, as presented.

Mr. Pollard stated the information in the report was complete and based on the Council discussion and recommendation of the SSC, he believes the Council should adopt it.

Motion 2 carried unanimously.

F.2 Identification of Management Objectives and Preliminary Definition on 2014 Salmon Management Alternatives (3/9/2014; 10:01 a.m.)

F.2.a Agenda Item Overview

Mr. Mike Burner presented the Agenda Item Overview which referenced:

- Agenda Item F.2.a, Attachment 1: Guidance for Alternative Development and Assessment.
- Agenda Item F.2.a, Attachment 2: Emergency Changes to the Salmon FMP.
- Agenda Item F.2.a, Attachment 3: FEDERAL REGISTER 97-22094: Policy Guidelines for the Use of Emergency Rules.

F.2.b Report of the Pacific Salmon Commission

Mr. Bob Turner presented F.2.b, Supplemental PSC Report.

F.2.c Reports and Comments of Advisory Bodies and Management Entities

Dr. Peter Dygert presented Agenda Item F.2.c, Supplemental NMFS Report: Letter Summarizing NOAA Fisheries' Consultation Standards and Guidance Regarding the Potential Effects of the 2014 Season on Listed Salmonid Species.

Mr. Phil Anderson presented Agenda Item F.1.b, Supplemental WDFW Report (moved to this agenda item as requested by Mr. Anderson); Agenda Item F.2.c, Supplemental WDFW/Tribal Report 2; and Agenda Item F.2.c, Supplemental WDFW/Tribal Recommendations.

Ms. Yaremko reported on some discussions with NMFS regulatory staff which indicate a possible need to evaluate a requirement for additional regulatory language related to filleting salmon at sea. The question arose in the 2013 fishery in regards to the legality of the practice of filleting salmon aboard California commercial passenger fishing vessels. This action is not authorized. However, it is not clearly specified as prohibited. There are existing federal regulations that define the dressed, head-off length for salmon and prohibitions that discuss removal of heads. However, there is nothing explicit to filleting the fish at sea. We are trying to determine if we need an explicit regulation for both commercial and sport fishing. We need the management entities and the Council advisors to weigh in on this issue. CDFW is looking at what they need at the state level, but we may need additional federal regulations.

Mr. Chris Williams, Mr. Wilbur Slockish, and Mr. Herb Jackson presented Agenda Item F.2.c, Supplemental Tribal Report.

Butch Smith presented Agenda Item F.2.c, Supplemental SAS Report: Salmon Advisory Subpanel (SAS) Proposed Initial Salmon Management Alternatives for Non-Indian Ocean Fisheries (with Jim Olson, Paul Heikkila, Dave Bitts, Steve Watrous, Mike Sorenson, Richard Heap, and Mark Gorelnik).

F.2.d Public Comment

Agenda Item F.2.d, Supplemental Public Comment: Comment from Steve Godin regarding coho retention.

Mr. Duncan MacLean, Troll Fisherman, Half Moon Bay, California.

F.2.e Council Action: Adopt Council Recommendations for Initial Alternatives for Salmon Technical Team Collation and Description (3/9/2014; 1:20 p.m.)

Mr. Sones presented Agenda Item F.2.c, Supplemental Tribal Report 2 as preliminary recommendations for 2014 management options for collation and analysis by the STT.

Mr. Anderson spoke to management objectives for 2014 fisheries, noting the inclusion of recommendations received from the tribes and WDFW relative to Puget Sound Chinook and coho stocks, and from the Quinault Indian Nation and WDFW relative to Grays Harbor fall Chinook. With respect to those recommendations and in reference to Agenda Item F.2.c, Supplemental WDFW/Tribal Report 2 and Supplemental WDFW/Tribal Recommendations, Mr. Anderson moved and Mr. Lincoln seconded Motion 3: Adopt for use in 2014 management, the objectives contained in Agenda Item F.2.c, Supplemental WDFW/Tribal Report and Agenda Item F.2.c, Supplemental WDFW/Tribal Report 2.

Mr. Anderson stated the Puget Sound Chinook recommendations are consistent with our Puget Sound Chinook Harvest Management Plan, with the exception of the Nisqually for which there will be further conversations; and the exception for Grays Harbor which is contained in Supplemental WDFW/Tribal Report 2 which is consistent with the review conducted by the Chinook Technical Committee of the Pacific Salmon Commission (PSC).

Mr. Turner asked (and the Council agreed) to have the STT model the Puget Sound consequences in a couple of different ways to bracket where that issue may be resolved for the sake of providing information to the Council and for the record.

Motion 3 carried unanimously.

Mr. Anderson stated his guidance to the STT would be to evaluate the information as shown for North of Falcon in Agenda Item F.2.c, Supplemental SAS Report to begin the multi-step process of developing the final options.

To help bracket a potential resolution to the Puget Sound problem, Mr. Turner asked for the STT to model the age-2 scalar issue in some different ways. The first way would be as suggested by Mr. Sones for both deep-south Puget Sound and mid-Puget Sound stocks. The second way, the status quo approach, would be to model the same as in the past. The third way would be to use the new scalars for the deep-south Puget Sound populations and the old scalars for the mid-central Puget Sound populations.

Mr. Buell recommended the STT assess the options South of Cape Falcon off Oregon as provided in Agenda Item F.2.c, Supplemental SAS Report. Regarding the pre-May fisheries, he recommended the Cape Falcon to Oregon-California border fishery be closed from March 1 through March 31, 2014 as an inseason action, which is reflected in the SAS report.

Ms. Yaremko offered guidance for the commercial troll alternatives of the SAS for the Klamath management zone (KMZ). She requested the SAS and STT work together to examine the issue of opening dates and the prospect for a 5-day per week fishery to provide a stop-and-count provision for management purposes as an added alternative. This could help manage the quota fishery more effectively. Further she directed the STT to strike the rollover provisions for quota fisheries that would be open in May, June, or July, as they are unnecessary. Further, regarding the Fort Bragg fishery, she directed that the opening date in Alternative 1 be changed from July 11 to July 8. She identified that determination of inseason action on the early fisheries would need to await further modeling of the currently proposed alternatives.

F.3 NMFS Report (3/9/2014; 1:39 p.m.)

F.3.a Agenda Item Overview

Mr. Mike Burner presented the Agenda Item Overview.

F.3.b Regulatory Activities

No report.

F.3.c Fisheries Science Center Activities

Dr. Pete Lawson and Dr. Steve Lindley provided Agenda Item F.3.c, Supplemental NMFS Science Center PowerPoint: Report on Science Center Activities. The report covered a variety of topics including the West Coast GSI program.

F.3.d Reports and Comments of Advisory Bodies and Management Entities

None.

F.3.e Public Comment

None.

F.3.f Council Discussion

None.

F.4 Council Recommendations for 2014 Management Alternatives Analysis (3/10/2014; 8:09 a.m.)

F.4.a Agenda Item Overview

Mr. Mike Burner presented the Agenda Item Overview.

F.4.b Reports and Comments of Advisory Bodies and Management Entities.

Dr. Robert Kope presented Agenda Item F.4.b, Supplemental STT Report: Collation of Preliminary Salmon Management Alternatives for 2014 Ocean Fisheries.

Mr. Brian Corrigan presented Agenda Item F.4.b, Supplemental EC Report.

F.4.c Public Comment

None.

F.4.d Council Direction to the Salmon Technical Team and Salmon Advisory Subpanel on Alternative Development and Analysis

Responding to issues raised by the collation of the preliminary salmon management alternatives in the Supplemental SST Report, Council members for the three coastal states recommended several changes to the preliminary options for further development and analysis by the STT and SAS.

North of Cape Falcon, Mr. Anderson provided guidance for changes that included some reductions in the non-tribal Chinook and coho quotas and, with regard to Puget Sound Chinook age-2 scalars, directed that modeling for the South Puget Sound impacts use the updated scalars, while using the old scalars for the Mid-Sound; and modeling both areas using the new scalars. Mr. Sones indicated the tribes were in agreement with the proposed changes.

South of Cape Falcon, Mr. Buell and Ms. Yaremko provided guidance for reducing some of the commercial and sport fisheries primarily to limit impacts on Klamath and Sacramento River fall Chinook, especially age-4 Klamath adults.

All of the specific changes identified for the STT to assess were subsequently reflected in Agenda Item F.5.b, Supplemental STT Report.

Ms. Yaremko moved and Mr. Wolford seconded Motion 6 to include Agenda Item F.4.c, Supplemental EC Report in the range of alternatives.

Ms. Yaremko stated the EC recommendation for a consistent federal regulation that prohibits all filleting of salmon at-sea would provide an additional level of security to ensure compliance with existing regulations. Ms. Yaremko clarified the intent of the motion was to have this proposed regulation included in one of the options for public review so that it could be implemented in 2014 if the Council so desires at the end of the process.

Motion 6 carried unanimously.

F.5 Further Council Direction on 2014 Management Alternatives (3/12/2014; 8:49 a.m.)

F.5.a Agenda Item Overview

Mr. Mike Burner presented the Agenda item Overview.

F.5.b Reports and Comments of Advisory Bodies and Management Entities

Dr. Robert Kope presented Agenda Item F.5.b, Supplemental STT Report.

Mr. Brian Corrigan presented Agenda Item F.5.b, Supplemental EC Report.

F.5.c Public Comment

None.

F.5.d Council Guidance and Direction

As subsequently reflected in Agenda Item F.6.b, Supplemental STT Report, Council members directed several changes to the management alternatives provided in Agenda Item F.5.b, Supplemental STT Report. The changes included reductions in the tribal and non-tribal overall Chinook quotas in Alternative 1 for north of Cape Falcon to limit impacts on Lower Columbia River (LCR) tules, and several minor changes in fisheries south of Cape Falcon, especially in the KMZ, to reduce impacts on age-4 Klamath Chinook.

F.6 Adoption of 2014 Management Alternatives for Public Review (3/13/2014 9:47 a.m.)

F.6.a Agenda Item Overview

Mr. Mike Burner Presented the Agenda Item Overview.

F.6.b Reports and Comments of Advisory Bodies and Management Entities

Dr. Robert Kope presented Agenda Item F.6.b, Supplemental STT Report: Analysis of Preliminary Salmon Management Alternatives for 2014 Ocean Fisheries.

Mr. Wilbur Slockish, Mr. Chris Williams and Mr. Herb Jackson presented Agenda Item F.6.b, Supplemental Tribal Report.

Agenda Item F.6.b, Supplemental ODFW Report.

F.6.c Public Comment

Mr. E. B. Duggan, Trinity River Guides, Willow Creek, California.

F.6.d Council Action: Adopt Management Alternatives for Public Review

Mr. Anderson thanked the STT for their work and stated he thought the current package represents a reasonable range of alternatives.

Mr. Anderson moved and Mr. Lincoln seconded Motion 16 that the Council adopt for public review the three alternatives for the commercial and recreational fisheries North of Cape Falcon as prescribed in Agenda Item F.6.b, Supplemental STT Report, dated March 13, 2014, with the following modifications:

1. Page 12, Alternative 1, change the bag limit from “All Salmon; two fish per day” to “All Salmon; two fish per day, no more than one of which can be a Chinook.”
2. Page 12, Alternative 3, change five days per week to seven days per week.

Regarding the Chinook options, Mr. Anderson stated the critical factor is the modeled impacts for the LCR tules which show a range of outcomes from 39.7 to 42.0 with the ceiling being 41.0. There is some uncertainty yet as to the impacts of the West Coast Vancouver Island fisheries that will be clarified later through the PSC. In the interim, the STT has made their best estimate of the probable impacts. That is the rationale for alternatives with outcomes that are both above and below the ceiling. For coho, the issue is the impact on interior Fraser River stocks (also referred to as Thompson River stocks). The alternatives show a range of outcomes for the ocean impacts (page 22) of 4.4 to 5.4 percent that is well within the range of the ocean impacts in the past 5 years (a range of the low 4's to 6.1 percent). We will be working in the North of Falcon process to look at inside fisheries and impacts and will have a package at the end of the process that will have impacts that are at or below 10.0 percent for Interior Fraser stocks.

Motion 16 carried unanimously.

Mr. Sones moved and Mr. Turner seconded Motion 17 that the Council adopt the three treaty ocean troll salmon season alternatives for public review as they are presented in Table 3 of Agenda Item F.6.b, Supplemental STT Report, March 13, 2014 on pages 19-20:

- Alternative I– quota levels of 67,500 Chinook and 60,000 coho
- Alternative II- quota levels of 62,500 Chinook and 55,000 coho
- Alternative III – quota levels of 55,000 Chinook and 47,500 coho

The salmon season will consist of a May/June Chinook-directed fishery and a July/August/September all-species fishery. The Chinook harvest will be split between the two periods with the following sub quotas:

Alternative I – 40,500; Alternative II – 36,250; Alternative III – 27,500 for the May/June/Chinook directed fishery and the remainder in each alternative for the July/August/September all species fishery.

The tribes request model runs be done on each of the three alternatives with what the tribes are proposing for Mid-Puget Sound age-2 Chinook recruit scalar and with what the WDFW is calling the "old" version, this would be a total of six model runs.

For the record, the tribes and state are just beginning the North of Falcon planning process in which we will evaluate the total impacts of all proposed fisheries on Puget Sound and Columbia River stocks.

Mr. Sones stated this was just a starting place for the work that would continue in the North of Falcon Process.

Mr. Anderson confirmed with Mr. Sones the tribal request for modeling the Puget Sound stock impacts did not include adding those stocks and impacts to the table in Preseason Report II.

Motion 17 carried unanimously.

Ms. Kirchner moved and Mr. Feldner seconded Motion 18 for the Council to adopt for public review the alternatives for non-Indian commercial and recreational fisheries between Cape Falcon and the Oregon/California border presented in Agenda Item F.6.b, Supplemental STT Report (March 13, 2014) with the changes described in Agenda Item F.6.b, Supplemental ODFW Report.

Ms. Kirchner stated the alternatives in the package meet our required conservation objectives. The change provided in the Supplemental ODFW Report is needed to provide for a rollover from sport to commercial fisheries in September since we need to have a preseason modeled-rollover estimate to be able to access the rollover if the opportunity arises.

Motion 18 carried unanimously.

Ms. Yaremko moved and Mr. Crabbe seconded Motion 19 to adopt for public review the alternatives for non-Indian commercial and recreational fisheries south of the Oregon/California border as presented in Agenda item F.6.b, Supplemental STT Report (March 13, 2014).

Ms. Yaremko noted the effort by the STT, SAS, and industry representatives to provide sound alternatives for public review.

Motion 19 carried unanimously.

F.7 Appoint Salmon Hearings Officers (3/13/2014; 10:30 a.m.)

F.7.a Agenda Item Overview

Mr. Mike Burner presented the Agenda Item Overview and Agenda Item F.7.a, Attachment 1: Schedule of Salmon Fishery Management Alternative Hearings.

F.7.b Council Action: Appoint Salmon Hearings Officers

Mr. Burner reported attendees for the Council staff will be Dr. Kit Dahl at the Westport hearing and Mr. Burner will attend the Coos Bay and Santa Rosa hearings.

Mr. Anderson noted he would serve as the hearing officer for the Westport hearing.

Ms. Kirchner reported Mr. Feldner would serve as the hearing officer for the Coos Bay hearing.

Ms. Yaremko reported Mr. Crabbe would serve as hearing officer in Santa Rosa.

Mr. Turner noted Emily Wilson would staff the Westport hearing, Mr. Lance Cruzic would staff the Coos Bay hearing, and Ms. Heidi Taylor would staff the meeting in Santa Rosa.

LCDR Casad stated he will advise the Council on USCG personnel that will attend the hearings.

Mr. Burner listed the STT members that would attend the hearings.

F.8 Sacramento Winter Chinook Harvest Control Rule (3/13/2014; 10:34 a.m.)

F.8.a Agenda Item Overview

Mr. Mike Burner presented the Agenda Item Overview and introduced the following attachments:

- Agenda Item F.8.a, Attachment 1: August 1, 2013 letter from Dr. McIsaac to Mr. Will Stelle, NMFS West Coast Regional Administrator regarding SRWC;
- Agenda Item F.8.a, Attachment 2: *Management Strategy Evaluation for Sacramento River winter Chinook salmon*; and
- Agenda Item F.8.a, Supplemental Attachment 3: Allowable or *de minimis* Fishery Impact Rates on Salmonid Stocks Listed under the Endangered Species List.

F.8.b Reports and Comments of Advisory Bodies and Management Entities

Mr. Robert Turner commented on Agenda Item F.8.a, Attachment 4: January 23, 2014 Federal Register Notice of Availability of a Management Strategy Evaluation, Request for Comments.

Mr. Mike Burner read Agenda Item F.8.b, Supplemental SSC Report.

Dr. Robert Kope presented Agenda Item F.8.b, Supplemental STT Report.

Mr. Dave Bitts presented Agenda Item F.8.b, Supplemental SAS Report.

F.8.c Public Comment

Mr. Dave Bitts, Pacific Coast Federation of Fishermen's Associations, Eureka, California.

F.8.d Council Action: Provide Guidance for Submitting Comments on the Sacramento Winter Chinook Harvest Control Rule

Mr. Wolford noted his agreement with the comments from Mr. Dave Bitts that we are interested in maintaining the fisheries and the run of winter-run fish. However, we can't do it all and he

would hope there are similar kinds of sacrifices being asked of other people who can control the fate of the winter-run far more than we can, for example the inland water practices and projects on the Sacramento River. He noted from the information in the Supplemental NMFS PowerPoint that there is not much difference in impacts on the winter-run among the control rule alternatives, all have a *de minimis* impact on the fishery. There is a significant change in the proportion between alternatives one and two, but between the others there isn't much change. What you don't see is the significant social and economic disruption on the fishery that some of these rules have. In particular, the impacts of the Southwest Region (SWR) and Alternative 5. He thought the SAS had done a thoughtful analysis in recommending Alternative 4. However, he would encourage more Council discussion before any action is taken.

Ms. Yaremko expressed support for the remarks from Mr. Wolford and Mr. Bitts. She supported the need for some level of *de minimis* fishery that is necessary to allow for some target fisheries. She thought Alternative 4 does allow for this and is the SAS recommendation. Even when fisheries are shut down, that didn't seem to have any effect on the escapement of winter-run. As Mr. Bitts stated, there doesn't seem to be a correlation between fisheries management and winter-run escapements. We need to continue to protect the winter-run through our current process. However, at the bottom end there is the real risk of severe economic consequences and we can probably do better than the rule we have today.

Mr. Wolford moved and Ms. Yaremko seconded Motion 20 that the Council write a letter to NMFS in response to the request for comment on the winter-run rule and endorse the use of control rule #4 per the assessment by the SAS; further, include in the letter the acknowledgment that the fishery is not the only source of impact on winter-run and encourage NMFS to address the issues of being "fair and equitable" with other parties who have similar or greater impact than the Council fisheries do.

Mr. Wolford stated the SWR control rule brings us to a knife edge drop to zero at a geometric mean of 500 that is unprecedented in any other control rule. Supplemental Attachment 3 shows other fishery control rules and there are a number of different and significant levels of which none are zero, which is far beyond what is required. With that drop, we need to be clear that there are social and economic impacts with millions of dollars at stake in the fishery. We are required by the MSA to ensure that we balance the needs for maintaining the resource with the maximized benefit to the Nation. That requires a better balance than provided by the existing SWR alternative. The risks estimated for the other control rules indicate little difference in the risk that can be measured. We have a good control rule with #4 and the ability to be fair and equitable with others who have more impact is an important issue that should be included in the letter.

Mr. Turner pointed out that the justification used by Mr. Wolford was mostly based on the MSA whereas the rule was under the authority of the ESA. He asked for some expansion of why control rule #4 may also meet the ESA requirements.

Mr. Wolford replied it is most critical to allow some beneficial fishing opportunity at the very low listed stock levels while minimizing risk to the listed stock. He contrasted control rule #3 with control rule #4. He noted control rule #4 provides more opportunity between 500 and 1000 fish than control rule #3. Then, as you drop below 500 fish, control rule #4 still provides some

fishing opportunity, but may offer more protection to the fish as the rate drops steadily toward zero while the impact rate under control rule #3 remains at a steady rate of 0.1. Control rule #5 and the SWR both take the impact rate to zero at significant numbers of the geometric mean. When the allowable impact rate goes to zero it closes all mixed stock fisheries. This mandated closure of the entire fishery makes the economic impact severe.

Dr. McIsaac asked Mr. Turner if he would speak to the policy considerations within the ESA that allow NMFS to weigh the risk and benefits in this determination.

Mr. Turner agreed the consultation standards allow for risk and there is a tremendous amount of scientific analysis that is involved in them. NMFS has developed common forms of consultation decisions criteria, viability risk analyses that are used to assess the effects of actions. In this situation we are focused on the green bars in the chart (Supplemental NMFS PowerPoint). It is true that the differences among rules is pretty small and within that context there is room for policy considerations about what the effects of the actions are on other activities. It is a reality though, that our point of departure in the analysis is not economics or impacts on other activities, but it is the effects on the listed species.

Motion 20 carried unanimously.

F.9 California Coastal Chinook Update (3/13/2014; 11:27 a.m.)

F.9.a Agenda Item Overview

Mr. Mike Burner presented the Agenda Item Overview and Agenda Item F.9.a, Attachment 1: California Coastal Salmonid Population Monitoring Strategy, Design, and Methods, CDFW, 2011.

F.9.b Reports and Comments of Advisory Bodies and Management Entities.

Mr. Mike Lacy presented Agenda Item F.9.b, Supplemental CDFW PowerPoint: CDFW Priorities for Monitoring California Coast Chinook Salmon.

Mr. Bob Turner presented Agenda Item F.9.b, Supplemental NMFS Report.

Mr. Mike Burner read Agenda Item F.9.b, Supplemental SSC Report.

F.9.c Public Comment

None.

F.9.d Council Action: Consider California Coastal Chinook Management Issues

Ms. Yaremko noted the importance of California coastal Chinook to our management. Our constituents continue to ask us to look for other management alternatives since we continually struggle under this age-4, 16 percent impact cap. It certainly is a priority focus. At this time we understand that we have the surrogate and use it appropriately and are not sure if there is anything else available. We look forward to continuing the monitoring work to ensure that the Biological Opinion and status reviews are up to date and reflect the best available science. Within the department this is a priority and we appreciate the attention on the issue that the Council demonstrates.

G. Pacific Halibut Management

G.1 Report on the International Pacific Halibut Commission (IPHC) Meeting (3/10/2014; 3:17 p.m.)

G.1.a Agenda Item Overview

Ms. Kelly Ames presented the Agenda Item Overview and introduced the following attachments:

- Agenda Item G.1.a, Attachment 1: IPHC News Release;
- Agenda Item G.1.a, Attachment 2: 2014 Area 2A Pacific Halibut Allocations; and
- Agenda Item G.1.a, Supplemental Attachment 3: *Federal Register* Notice dated February 6, 2014, Proposed Rule, Halibut Catch Sharing Plan; and PFMC Comments Transmitted to NMFS.

G.1.b IPHC Report

Dr. Bruce Leaman and Mr. Claude Dykstra of the IPHC presented Agenda Item G.1.b, Supplemental IPHC PowerPoint: Summary of the IPHC's 90th Annual Meeting and Setline Expansion Survey.

G.1.c Council Representative Report

Ms. Gway Kirchner presented Agenda Item G.1.c, IPHC Meeting Summary: Report on the 2014 International Pacific Halibut Commission Annual Meeting.

G.1.d Reports and Comments of Advisory Bodies and Management Entities

Mr. Bob Alverson presented Agenda Item G.1.d, Supplemental GAP Report.

G.1.e Public Comment

Agenda Item G.1.e, Supplemental Public Comment: Letter from Cliff Hart, Humboldt Area Saltwater Anglers, Inc regarding halibut sport fishing.

Mr. Jim Yarnell, Humboldt Area Saltwater Anglers, Eureka, California.

Mr. Ben Doane, Humboldt Area Saltwater Anglers, McKinleyville, California.

Mr. Tom Marking, GAP Member, McKinleyville, California.

Mr. Sonke Mastrup, California Fish and Game Commission, Sacramento, California.

G.1.f Council Discussion

LCDR Casad discussed safety during the 2013 season and the USCG concerns regarding the derby fisheries used within Area 2A.

Mr. Wolford listed some of his questions with regard to how the Pacific halibut abundance and allocations are determined and expressed concerns for how the Council would deal with the possible reallocation and catch sharing. He is looking forward to planning a rational discussion and process in June in preparation for the 2015 season.

Mr. Anderson spoke to the process and the agreement of WDFW and ODFW to meet with CDFW representatives and have discussions to help reach a resolution on the process and issues.

Ms. Yaremko acknowledged the IPHC for the additional research they have done and understood that this would be the first time information from outside the survey might be included in the stock assessment. She welcomed the opportunity to show if there is an abundance of fish off of California that might contribute to the overall harvest.

G.2 Incidental Catch Recommendations for the Salmon Troll and Fixed Gear Sablefish Fisheries (3/11/2014; 10:12 a.m.)

G.2.a Agenda Item Overview

Ms. Kelly Ames presented the Agenda Item Overview and introduced Agenda Item G.2.a, Attachment 1: Summary of Pacific Halibut Incidental Catch Management.

G.2.b Reports and Comments of Advisory Bodies and Management Entities

Mr. Paul Heikkila presented Agenda Item G.2.b, Supplemental SAS Report.

Mr. Mark Cedergreen presented Agenda Item G.2.b, Supplemental GAP Report.

Sgt. Dan Chadwick presented Agenda Item G.2.b, Supplemental EC Report. [This report recommended a federal regulation requiring individual fish reporting on the fish tickets which was only required by Washington state law.]

G.2.c Public Comment

None.

G.2.d Council Action: Adopt Public Review Options for 2014 and April 2015 Salmon Troll Fishery; Make Recommendations for Inseason Changes to April 2014 Retention Limits in the Salmon Troll Fishery, as Necessary; Adopt Final Retention Limits for 2014 Fixed Gear Sablefish Fishery.

Ms. Ames stated she has amended the Council action statement that is on the screen to be clearer with regard to the salmon troll regulations that go into the following year (April 1-30, 2015).

Mr. Anderson elicited information from Mr. Paul Heikkila to indicate that the salmon troll industry recommendations for the incidental halibut catch regulations represented a consensus and any changes to them might unbalance that consensus.

Ms. Kirchner moved and Mr. Feldner seconded Motion 12 that the Council recommend inseason action to modify the April 1-30, 2014 incidental Pacific halibut catch regulations as provided in Agenda Item G.2.b, Supplemental SAS Report which states that license holders may land no more than one Pacific halibut per each four Chinook, except one Pacific halibut may be landed without meeting the ratio requirement, and no more than 12 halibut landed per trip.

Ms. Kirchner stated her motion represented a consensus of the industry and that they were trying to respond to a slight decrease in halibut abundance and she would respect and honor that point.

Motion 12 carried unanimously.

Ms. Kirchner moved and Mr. Anderson seconded Motion 13 that the Council adopt for public review, the range of Pacific halibut restrictions for the salmon troll fishery from May 1, 2014 to December 31, 2014 and April 1-30, 2015 as shown in Agenda Item G.2.b, Supplemental SAS Report.

Ms. Kirchner stated the motion is aimed at following the catch sharing language that points toward taking a large chunk of this catch in the April through June time frame. We are also seeing a slight decrease in the allowable quota and it is prudent to look at a more restrictive alternative to address those issues. Our track record on adjusting inseason is good and we have the ability to see how the year progresses to increase or decrease the limits.

Motion 13 carried unanimously.

Mr. Anderson moved and Ms. Kirchner seconded Motion 14 that the Council adopt an incidental halibut retention allowance for the commercial sablefish fishery north of Point Chehalis, Washington of 75 pounds dressed weight of halibut for every 1,000 pounds dressed weight of sablefish landed and up to 2 additional halibut in excess of the 75-lbs-per-1,000-pound ratio per landing.

Mr. Anderson stated his motion came from the recommendation of the GAP which was modified by the language recommended by the EC. In looking at the historical information in Attachment 1 you can see that last year's total harvest with these same regulations was 12,000 pounds. The allocation for this year is 14,274 pounds and we have the ability to adjust inseason to maintain the limits for this year.

Motion 14 carried unanimously.

There was some uncertainty as to how the EC recommendation (federal regulation requiring individual documentation of numbers of fish landed) should be handled for Oregon and California. Ms. Kirchner indicated her state could enact the regulation while Ms. Yaremko was supportive of including it in federal regulations, at least off California. The Council decided to let the advisors work on this issue and provide recommendations in the final adoption of the salmon alternatives for public review.

H. Enforcement

H.1 Vessel Monitoring System Ping Rate (3/11/2014; 11:04 a.m.)

H.1.a Agenda Item Overview

Mr. Jim Seger presented the Agenda Item Overview.

H.1.b Office of Law Enforcement Report

Dayna Matthews presented Agenda Item H.1.b, NMFS OLE Report: NMFS Office of Law Enforcement Report on Vessel Monitoring System (VMS) Ping Rate.

H.1.c Reports and Comments of Advisory Bodies and Management Entities

Mr. Bob Puccinelli presented Agenda Item H.1.c, Supplemental EC Report.
Mr. Paul Heikkila presented Agenda Item H.1.c, Supplemental SAS Report.
Mr. Gerry Richter presented Agenda Item H.1.c, Supplemental GAP Report

H.1.d Public Comment

Mr. Joe Dazey, Washington Troller's Association, Kingston, Washington.
Mr. Steve Wilson, Coastal Trawlers Association, Federal Way, Washington.
Mr. Gerry Richter read comments by Mr. Dave Kirk, Port San Luis Commercial Fisherman's Association; Port San Luis, California.
Mr. Gerry Richter, GAP Member, Santa Barbara, California.
Mr. Ben Enticknap, Oceana, Portland, Oregon.
Mr. Jason Robinson, F/V Risa Lynn, Santa Barbara, California.
Mr. Jeff Hepp, Santa Barbara Trawlers Association, Santa Barbara, California.

H.1.e Council Discussion (3/11/2014; 1:25 p.m.)

Mr. Farrell stated the information provided by the advisory bodies and public on this issue was helpful, but he would like a better and more accurate view of the costs, possibly from the manufacturer. He noted the potential use of alternate technologies, such as data loggers and geofencing, with the goal and possibility of increasing the accuracy of vessel location. It is important to have this fine scale resolution to help implement area management regulations without increasing buffer zones and to mitigate management costs. He would like to see more analysis completed (not sure who would do that) and the information brought back for further Council discussion and an informed decision. There is some urgency in this situation for the proper functioning of the OLE.

Mr. Feldner commented regarding the recommendation of the SAS and others for requiring a 15 minute ping rate for the open access salmon troll vessels. He believes that would not be necessary as these vessels can legally fish with troll gear inside the RCA.

Ms. Lowman thought this information was useful and noted that one of the tasks under this agenda item was to consider if we should start a regulatory amendment at this time which we would need to more fully consider in our meeting agenda prioritization under Agenda Item J.4

Mr. Brizendine would like more information about our ability to increase the ping rate. He thought this would be the easiest and most efficient way to achieve our objectives.

Ms. Culver noted the Council has discussed the ping rate several times. She thought we need to give enforcement adequate tools to enforce and use VMS effectively, since her understanding is that it isn't very effective with the hourly ping rate. She did not have a good sense of the number of VMS incursions that resulted in citations and fines versus contested citations that are brought before an administrative law judge. She would like to have that information. On the issue of the salmon trollers, Ms. Culver could see both sides of that issue. She thought the salmon trollers do have an RCA and do have a privilege that others don't have in being able to fish in the RCA and retain groundfish. We have certainly heard from others that they would also like to be able to

retain yellowtail and lingcod and to do so in the RCA. She did not have a good sense in the case of the salmon trollers as to the number of trollers who do land yellowtail and lingcod. She would like to have that type of information. She noted the Council has a heavy workload and that we will be looking at this and the competing priorities in our workload planning. However, she wants to make sure that we have effective enforcement tools.

Ms. Kirchner noted not all of the contested VMS cases go before an administrative law judge. Some are processed through the state courts and jury trials. Cases have been lost because there is some doubt about whether the fishing occurred within the RCA or if the vessel left, fished, and then re-entered the RCA. She has struggled with these issues. She wants the best enforcement possible, but also doesn't want an additional burden on the majority of fishermen who are law-abiding. We need to find other mechanisms, technologies, ping rates, or something to enforce closures in the RCA while not imposing unnecessary burdens across the entire fleet.

Mr. Farrell noted the VMS issue is a part of the electronic monitoring (EM) program and a big piece of finding a resolution should come from inside that effort.

Mr. Pollard stated this is about as far as we can go with this issue right now and that it would certainly be part of the Council's priority planning in June.

Mr. Lincoln agreed and asked if NMFS could commit to providing more information in June on existing alternatives for increasing ping rates as well as alternative opportunities for enforcement.

Mr. Helvey replied Mr. Mathews has been taking notes and we would be looking to provide the type of information identified here to the Council in June.

I. Coastal Pelagic Species Management

I.1 Pacific Sardine Temperature Parameter Review (3/11/2014; 1:40 p.m.)

I.1.a Agenda Item Overview

Mr. Kerry Griffin presented the Agenda Item Overview.

I.1.b Report on Pacific Sardine Temperature Parameters

Mr. Felipe Hurtado presented Agenda Item I.1.b, Attachment 1: Revised Analyses Related to Pacific Sardine Harvest Parameters.

I.1.c Reports and Comments of Advisory Bodies and Management Entities

Ms. Lorna Wargo referenced Agenda Item I.1.c, CPSMT Report and presented Agenda Item I.1.c, Supplemental CPSMT PowerPoint.

Dr. Owen Hamel presented Agenda Item I.1.c, Supplemental SSC Report.

Ms. Diane Pleschner-Steele presented Agenda Item I.1.c, Supplemental CPSAS Report.

I.1.d Public Comment (3/11/2014; 3:13 p.m.)

Agenda Item I.1.d, Public Comment: Comments from Richard Parrish on the Sardine Re-analysis.

Agenda Item I.1.d, Supplemental Public Comment 2: Letter from California Wetfish Producers Association regarding Richard Parrish's comments.

Agenda Item I.1.d, Supplemental Public Comment 3: Letters from Pew Environmental Group and Oceana.

Mr. Steve Marx, PEW Charitable Trusts, Portland, Oregon.

Mr. Ryan Kapp, Fisherman, Bellingham, Washington.

Dr. Geoff Shester, Oceana, Monterey, California.

Ms. Diane Pleschner-Steele, California Wetfish Producers Association, Buellton, California.

I.1.e Council Action: Consider Technical Changes in Temperature and Stock Productivity Parameter Changes and Other Fishery Management Changes for Pacific Sardine

The Council discussed what actions could be completed at this meeting and the timeline and workload that would be required to implement harvest and OFL control rules utilizing the California Cooperative Oceanic Fisheries Investigations (CalCOFI) temperature index in time for the July 1, 2014 through June 30, 2015 sardine season. For this meeting, it was determined that the Council could take final action on the technical change of replacing the Scripps Institution of Oceanography (SIO) temperature index with the CalCOFI temperature index as they apply to the OFL control rule calculations. Regarding the timeline for final implementation of the harvest policy changes, Mr. Helvey indicated it would not be possible for NMFS to provide a NEPA document by April. Applying the new temperature index to the harvest control rule would require subsequent action at a future Council meeting.

Ms. Yaremko moved and Ms. Culver seconded Motion 15 for the Council to:

1. Replace the existing Scripps Institute of Oceanography (SIO) temperature index with the CalCOFI temperature index for purposes of determining both OFL FRACTION and harvest guideline (HG) FRACTION.
2. In order to accommodate regulatory amendment timelines, for 2014-15 fishing season only, the CalCOFI index shall be used for purposes of determining OFL, while the SIO index would need to be used for purposes of calculating the HG FRACTION.
3. Accept the SSC Recommendation (Agenda Item I.1.c, Supplemental SSC Report) that the OFL for the northern subpopulation of Pacific sardine be based on an Emsy proxy derived from the relationship between estimated Emsy and the 3-year moving average of the CalCOFI Temperature index, restricted to an OFL FRACTION (or Emsy) range of 0-25 percent.
4. Evaluate additional alternatives for a HG FRACTION (or Emsy) of 0-20 percent and 5-20 percent based on the 3-year moving average of the CalCOFI temperature index, which preserves current policy by allowing higher harvest rates in periods of high biomass and productivity, but constrains harvest rates when biomass and productivity are low. (*See Culver/Yaremko amendment below*).
5. Direct the Coastal Pelagic Species Management Team (CPSMT) to move to other priority needs while continuing to routinely advise the Council as to whether the sardine control

rules are achieving the coastal pelagic species CPS FMP goals identified in both the CPSMT and supplemental CPSAS reports (Agenda I.1.c).

Ms. Yaremko stated the use of the CalCOFI temperature index has been extensively reviewed and recommended as the best available science for informing us on temperature as it relates to sardine productivity. Rule-making timelines prevent utilization of the CalCOFI temperature index for the 2014-2015 season with regard to the harvest guideline fraction. However, we are able to use it for the OFL determination backed by the recommendation of the SSC and intend to use it for the HG FRACTION determination in the future when that approach is made available through the regulatory process. Item 3 follows the SSC recommendation to restrict the OFL fraction range to 25 percent. Item 4 suggests considering some additional alternatives that are worthy of examination. Lastly, item 5 recognizes we have spent a lot of time on examining the harvest control rule and that there are other priority needs for the management team while still tracking the performance of the sardine control rules.

Ms. Culver spoke in support of the motion in following the SSC recommendation for the best available science while recognizing the need for a hybrid approach for this coming season. She supported full implementation of the CalCOFI temperature index with the OFL fraction as soon as the regulatory process allowed. She is not sure the 10-20 percent range exactly captures what we previously had in place with the 5-15 percent range. She believes we have tended to focus on the upper end of sea surface temperature because that is what we have experienced for so long and she is not sure we have fully evaluated what would occur at low temperatures. She just wants to make sure we have the flexibility to do that and is not anxious to go through another rule-making process. That is why she is supportive of evaluating additional alternatives. She agrees on the need to prioritize the work of the team to focus on some of the other stocks that we have not had time to work on.

Ms. Yaremko clarified her intent in looking at additional alternatives (item 5) was to get more information about the lower end of the range. There have been many model runs, but she is not sure if the 0-20 percent range has been evaluated. Also, most of the analysis for the NEPA review is yet to be done. We will likely be taking this matter up again sometime between now and next March when we would be taking final action on a revised harvest guideline fraction for implementation beginning July 2015. She would leave it to the management team and NMFS to decide who best could do the NEPA evaluation.

Ms. Culver moved and Ms. Yaremko seconded Amendment 1 to Motion 15 to insert in item 4: Direct the CPSMT to evaluate additional alternatives in sufficient time for implementation for the July 1, 2015 fishery start date.

Ms. Culver stated she assumed the team would be doing the work of evaluating the alternatives and that once this issue was scheduled for action, NMFS would have the NEPA documents completed.

Amendment 1 carried unanimously. Motion 15, as amended, carried unanimously.

Mr. Crabbe offered guidance on the additional alternatives. In doing the alternative fractions, he wanted to make sure the analysis included the cut-off and also at high abundance levels, to see what a 0-20 percent or 5-20 percent fraction would do with low temperatures.

Ms. Culver stated she would concur with the team analyzing a full range of reasonable possibilities.

J. Administrative Matters

J.1 Magnuson-Stevens Act (MSA) Reauthorization Priorities and other Legislative Matters (3/11/2014; 4:35 p.m.)

J.1.a Agenda Item Overview

Ms. Jennifer Gilden presented the Agenda Item Overview and introduced the following attachments:

- Agenda Item J.1.a, Attachment 1: House MSA Reauthorization Bill Discussion Draft;
- Agenda Item J.1.a, Attachment 2: Staff Analysis of House Discussion Draft;
- Agenda Item J.1.a, Attachment 3: Western Pacific Fishery Management Council Perspectives on Discussion Draft;
- Agenda Item J.1.a, Attachment 4: Verbal Testimony of Dr. Donald McIsaac;
- Agenda Item J.1.a, Attachment 5: Written Testimony of Dr. Donald McIsaac;
- Agenda Item J.1.a, Attachment 6: Letter to Congress on Council MSA Priorities;
- Agenda Item J.1.a, Attachment 7: March 2014 Staff Summary of Federal Legislation;
- Agenda Item J.1.a, Supplemental Attachment 8: New England Fishery Management Council Draft Comments on the MSA Discussion Draft;
- Agenda Item J.1.a, Supplemental Attachment 9: Testimony of Dorothy Lowman, Chair of the Pacific Fishery Management Council on Pacific Council perspectives on Magnuson-Stevens Act Reauthorization before U.S. House of Representatives Committee on Natural Resources “Strengthening Fishing Communities and Increasing Flexibility in Fisheries Management Act” Hearing February 28, 2014;
- Agenda Item J.1.a, Supplemental Attachment 10: Assembly Bill No 2019; Introduced by Assembly Members Fong and Levine (Principal Coauthor: Assembly Member Stone) (Coauthor: Assembly Member Rendon) February 20, 2014; and
- Agenda Item J.1.a, Supplemental Attachment 11: Letter from Mr. Phil Anderson, WDFW, to the Honorable Doc Hastings, Regarding WDFW – Initial Comments on the December 18, 2013 “Discussion Draft” Proposal to Amend the MSA.

J.1.b Report of the Legislative Committee

Ms. Jennifer Gilden read Agenda Item J.1.b, Supplemental Legislative Committee (LC) Report (Mr. Wolford and Dr. Hanson recommended some minor changes to pages 4 and 6 of the Supplemental LC Report. Mr. Anderson supported substituting “possible” with “practicable” in the Council’s comments).

J.1.c Reports and Comments of Advisory Bodies and Management Entities

Agenda Item J.1.c, Supplemental Draft EC Report.

LCDR Gregg Casad presented Agenda Item J.1.c, Supplemental EC Report.
Mr. Doug Fricke presented Agenda Item J.1.c, Supplemental HMSAS Report.

J.1.d Public Comment

Agenda Item J.1.d, Supplemental Public Comment: Letter from International Law Offices, San Diego regarding Assembly Bill No 2019.

Ms. Teri Shore, Turtle Island Restoration Network, Forest Knolls, California - *withdrawn*.

Mr. Rod Moore, West Coast Seafood Processors Association, Portland, Oregon.

Mr. Ben Enticknap, Oceana, Portland, Oregon.

Mr. Peter Flournoy, International Law Offices of San Diego, San Diego, California.

J.1.e Council Action: Consider the Report and Recommendations of the Legislative Committee (3/12/2014; 8:09 a.m.)

[NOTE: The Council discussed the issue of responding to a request to comment on the issues around proposed California State legislation with regard to a ban on all drift gillnetting (letter under Agenda Item K.5). NOAA GC did not have a definitive answer on the issue of responding to a request for comment on state legislation at the time of this discussion. It was decided the issue would be covered under Agenda Item K.5. Mr. Wolford pointed out that the letter ask for a response on four points and was not a request to comment on the legislation. A response to the four points was later handled by NMFS.]

The Council began consideration of the Supplemental LC Report in regards to what would be incorporated into a Council letter to Congress which would need to be delivered before the end of March.

Mr. Myer suggested that, due to changing perceptions and because it is under the prevue of the Department of Agriculture, the Council delete the recommendation for stricter seafood import labeling requirements.

Mr. Wolford noted this was the first time we had heard from the Highly Migratory Species Advisory Subpanel (HMSAS) on reauthorization and suggested Council staff review the Supplemental HMSAS Report and incorporate any pertinent recommendations that had not been previously considered in the Council's letter. He did not think the redirection of the Saltonstall-Kennedy funds rose to that level. However, he thought that the first bullet in the Supplemental HMSAS Report (directing the Secretary to identify nations that are not compliant with Regional Fishery Management Organization measures and take steps to impose trade sanctions on those nations in accordance with existing MSA provisions) was important and should be included. He also identified the fourth bullet (concerning MSA language that would prevent reductions of U.S. fisheries catch and effort limits if other countries cannot demonstrate compliance with existing international conservation and management measures). Other items he considered applicable to the letter were the fifth bullet on marine mammals and the sixth bullet on primacy of the MSA authority and process. He noted the remaining recommendations on the last page of the Supplemental HMSAS Report were either already identified as priorities or should be added.

Mr. Anderson noted the issue of substituting "practicable" for "possible" and keeping that in the letter. He was supportive of adding the priorities identified in the Supplemental LC Report and

for dropping the seafood labeling recommendation as noted by Mr. Myer. He was not supportive of all of the items in the Supplemental HMSAS Report that Mr. Wolford spoke to, for example, promulgating all marine mammal and other species protective and conservation management measures through the MSA (bullet five). There may be specific requirements for fishing activities which they need to prescribe. He did not believe the redirection of a portion of Salstonstall-Kennedy funds was appropriate in the context of this letter. He also stated we needed to be sure that the recommendation on enforcement (from the EC) did not imply state authority over treaty Indian fisheries. He was supportive of staff taking the information from the Council discussion and Mr. Moore's comments in public testimony to draft the letter.

Mr. Farrell expressed support for the points in the Supplemental LC Report and in particular those items that provide clarity on the enforcement language regarding the use of the EM data. He thanked Mr. Anderson for including expansion of state authority for Dungeness crab management and for state enforcement authority beyond 3 miles. He thought such action would help remove several legal loopholes.

Dr. McIsaac expressed concern about what would go in the letter regarding any points of disagreement among Mr. Wolford and Mr. Anderson. Mr. Wolford clarified and Ms. Culver agreed that anything that was not unanimous should not go in the letter.

J.2 Approval of Council Meeting Minutes (3/13/2014; 11:58 a.m.)

J.2.a Council Member Review and Comments

Ms. Lowman asked for comments on and approval of the September Council meeting minutes as provided in Agenda Item J.2.a, Attachment 1: Draft Minutes: 220th Session of the Pacific Fishery Management Council (September 2013).

J.2.b Council Action: Approval of Previous Council Meeting Minutes

Mr. Myer noted a correction on page 26 in the second paragraph under Council Action, second to the last line, in regard to the feasibility of assessments for brown or copper rockfish. The correction should be south of "42°" N. latitude rather than 44° N. latitude.

Mr. Roth noted a typo on page 8 regarding reference to the increase in the Bonneville Dam fish count to 250,000 in one day. It is likely 25,000, but can probably be stricken as he is not sure of the actual number.

Mr. Ortmann moved and Mr. Pollard seconded Motion 21 to approve the draft minutes as presented for September 2013 (Agenda Item J.2.a, Attachment 1), with the identified corrections.

Motion 21 carried unanimously.

Dr. McIsaac noted an error had recently been noted by Mr. Wolford in the April 2013 Council minutes in which they referred to a "Supplemental GMT Report" (Agenda Item D.5.b) which was not supplemental, but rather the original GMT Report. This technical correction has been made in the record.

J.3 Membership Appointments and Council Operating Procedures (3/13/2014; 12:03 p.m.)

J.3.a Agenda Item Overview

Mr. Chuck Tracy presented the Agenda Item Overview and announced the new designee for the state of Washington as Mr. Kyle Adicks.

J.3.b Reports and Comments of Advisory Bodies and Management Entities

None.

J.3.c Public Comment

Mr. E. B. Duggan, Trinity River Guides, Willow Creek, California.

J.3.d Council Action: Consider Changes to Council Operating Procedures and Appointments to Advisory Bodies

Mr. Sones moved and Mr. Turner seconded Motion 22 to appoint Dr. Galen Johnson to fill the tribal government seat on the Scientific and Statistical Committee, and to appoint Mr. Kris Northcut to fill the tribal government seat on the Highly Migratory Species Management Team.

Motion 22 carried unanimously.

Ms. Yaremko moved and Mr. Wolford seconded Motion 23 to appoint Ms. Melodie Palmer-Zwahlen to fill the California Department of Fish and Wildlife seat on the Salmon Technical Team.

Motion 23 carried unanimously.

Ms. Kirchner moved and Mr. Feldner seconded Motion 24 to appoint Lieutenant Tim Schwartz to fill the Oregon State Patrol seat on the Enforcement Consultants.

Motion 24 carried unanimously.

Mr. Turner moved and Mr. Pollard seconded Motion 25 to appoint Dr. John Stadler to fill the West Coast Region seat on the Habitat Committee, and to designate Ms. Korie Schaeffer as his alternate.

Motion 25 carried unanimously.

Ms. Lowman reported she is making the following appointments to the ad hoc Lower Columbia Natural Coho Workgroup:

- Mr. Chris Kern and Mr. Geoffrey Whisler, Oregon Department of Fish and Wildlife;
- Ms. Cindy LeFleur and Mr. Doug Milward, Washington Department of Fish and Wildlife;
- Mr. Jeromy Jording and Mr. Enrique Patiño, National Marine Fisheries Service; and

- Mr. Stuart Ellis and Mr. Hap Leon, tribal governments.

Ms. Lowman stated there was a little work yet to do with regard to appointments to the Take Reduction Team, but that would occur by the April Council Meeting.

J.4 Future Council Meeting Agenda and Workload Planning (3/13/2014; 12:16 p.m.)

J.4.a Agenda Item Overview

Dr. Don McIsaac presented the Agenda Item Overview and directed Council members to the following attachments:

- Agenda Item J.4.a, Attachment 1: Pacific Council Workload Planning: Preliminary Year-at-a-Glance Summary;
- Agenda Item J.4.a, Attachment 2: Draft Proposed Council Meeting Agenda, April 3-10, 2014 in Vancouver, WA;
- Agenda Item J.4.a, Supplemental Attachment 3: Process for Pacific Council review of Allowable Fishery Impacts to Lower Columbia Natural Coho (2014 March Draft); and
- Agenda Item J.4.a, Supplemental Attachment 4: Pacific Council Workload Planning: Preliminary Year-at-a-Glance Summary and Draft Proposed Council Meeting Agenda, April 3-10, 2014 in Vancouver, WA.

Dr. McIsaac reminded the Council of the omnibus designation that included all of the groundfish regulatory issues that were separated from the biennial specifications process. He also noted the April agenda, as presented in the supplemental attachment, was near final and would need to be finalized today to meet the *Federal Register* deadline.

J.4.b Reports and Comments of Advisory Bodies and Management Entities

Mr. John DeVore presented Agenda Item J.4.b, Supplemental GMT Report.

Mr. Butch Smith presented Agenda Item J.4.b, Supplemental SAS Report.

J.4.c Public Comment

Mr. Steve Marx, PEW Charitable Trusts, Portland, Oregon.

J.4.d Council Action: Discussion and Guidance on Future Meeting Agenda and Workload Planning

Ms. Kirchner noted the GMT is overwhelmed with the current workload. She appreciates the table that they have provided to limit and focus their time on just three issues. If there is any time remaining, her recommendation would be to work on the electronic monitoring program. She didn't see the other issues as critical.

Mr. DeVore commented the task regarding the Pacific whiting fishery is to adopt the set-asides in that fishery which would not require much effort, primarily just a quick review of the data by the GMT.

Ms. Yaremko echoed the concerns and priorities expressed by Ms. Kirchner. She agreed with Mr. Marx's recommendation for a stand-alone item for highly migratory species (HMS) to take a

look at hard caps and observers, outside of the routine management measures. She would like to see the EM informational presentation broadened beyond just groundfish.

Mr. Lincoln supported the previous comments. He hoped the timing on the rule concerning HMS observers and hard caps could be such that there would be time for more Council input. Regarding the unmanaged forage fish issue, he would like to see the Council have the latitude to consider doing something in November after we have some more input. Dr. McIsaac replied that would be possible.

Ms. Lowman agreed the EM informational briefing has been focused on the groundfish issues, but thought we should be looking at it in terms of what might be transferable to the other fisheries.

The Council further discussed the upcoming albacore negotiations and timing of a draft agreement for a mid-April session to come up with a 2014 regime. Any agreements will be reported at the June Council meeting.

Ms. Yaremko noted the benefits of our increasing use of webinars.

[Council concluded this agenda item at 1:15 p.m. and adjourned the meeting]

K. Highly Migratory Species management

K.1 National Marine Fisheries Service Report (3/12/2014; 9:37 a.m.)

K.1.a Agenda Item Overview

Dr. Kit Dahl presented the Agenda Item Overview.

K.1.b Regulatory Activities

Mr. Mark Helvey presented Agenda Item K.1.b, NMFS Report: NMFS Highly Migratory Species Regulatory Report.

K.1.c Fisheries Science Center Activities

Dr. Russ Vetter presented Agenda Item K.1.c, NMFS SWFSC Report: Research Activities and Agenda Item K.1.c, Supplemental SWFSC PowerPoint 1: Southwest Fisheries Science Center, HMS Research Report.

Ms. Rebecca Lewison and Ms. Sara Maxwell presented Agenda Item K.1.c, Supplemental SWFSC PowerPoint 2: Developing Dynamic Ocean Decision-making applications for Pacific Fisheries.

K.1.d Reports and Comments of Advisory Bodies and Management Entities

Mr. Doug Fricke presented Agenda Item K.1.d, Supplemental HMSAS report.

K.1.e Public Comment

Agenda Item K.1.e, Supplemental Public Comment: Letter from International Law Offices of San Diego.

Mr. Ben Enticknap, Oceana, Portland, Oregon.

K.1.f Council Discussion

Ms. Yaremko asked whether the temporary emergency action (78 FEDERAL REGISTER 54548) for the California drift gillnet fishery would expire before the start date of the next fishing season.

Mr. Helvey replied an emergency rule expires after 180 days and Mr. Feder said under the MSA an emergency action can be extended for one additional six month period. Mr. Helvey noted permanent regulations prohibit the fishery from near shore areas until August 15 and therefore it would not occur before then.

Mr. Wolford asked if NMFS would extend the temporary emergency rule and would there be 100 percent observer coverage. Mr. Helvey responded NMFS would consider an extension, but 100 percent observer coverage was not possible.

On another topic, Ms. Culver asked if NMFS would consult with the Western Pacific Fishery Management Council (WPFMC) regarding the Hawaii longline fishery harvest of the 500 mt bigeye tuna quota in the Eastern Pacific Ocean. Mr. Helvey noted the quota only applies to vessels longer than 24 meters. There are 29 such vessels in the Hawaii fleet and one from the West Coast that are competing for this quota. The WPFMC and PFMC haven't coordinated on measures regarding the harvest of this quota and NMFS WCR has not yet weighed in on the issue. He observed the WPFMC is advocating for unused quota of Asian nations to be transferred to the U.S. to alleviate the current constraint on the Hawaii fleet, but this is a long-term solution.

Ms. Culver asked if any of this bigeye is landed on the West Coast and Mr. Helvey replied the Hawaii fleet lands all their tuna in Hawaii, although they land swordfish on the West Coast.

Dr. McIsaac asked about permit requirements for this fishery. Mr. Helvey responded permits are not limited for West Coast HMS vessels but the Hawaii longline fishery operates under a limited access permit program. Past analysis by NMFS indicates up to seven West Coast vessels could potentially participate in the longline fishery, although only one vessel is currently participating.

Mr. Wolford asked about "unobservable" boats in the California drift gillnet fishery. Mr. Helvey explained the requirements and objectives for observer coverage in the fishery.

K.2 Vessel Monitoring Systems (VMS) for Highly Migratory Species Fisheries (3/12/2014; 10:37 a.m.)

K.2.a Agenda Item Overview

Dr. Kit Dahl presented the Agenda Item Overview and introduced Agenda Item K.2.a, Attachment 1: 79 FEDERAL REGISTER 7152, Establishment of Tuna Vessel Monitoring System in the Eastern Pacific Ocean.

K.2.b National Marine Fisheries Service Report

Mr. Mark Helvey noted the proposed rule was in the Briefing Book and the public comment period ended on March 10. He encouraged the Council to provide comments even though the public comment period had ended. He discussed the results of public hearings NMFS held and the provision to allow VMS units to be turned off at times when tuna were not in the area.

Mr. David Hogan provided comments concerning the information from the measure under the proposed rule.

K.2.c Reports and Comments of Advisory Bodies and Management Entities

Mr. Doug Fricke presented Agenda Item K.2.c, Supplemental HMSAS Report.

K.2.d Public Comment

Mr. Gene Fisher, F/V Two Fishers, Seattle, Washington.

K.2.e Council Action: Consider the NMFS Report and Provide Guidance for Implementation of VMS in Highly Migratory Species Fisheries

Mr. Helvey confirmed for Ms. Culver that the estimated number of vessels the VMS requirement would apply to is 17.

Ms. Culver asked for confirmation of her understanding of the proposed VMS requirements. She presumed they would apply to purse seine and hook-and-line vessels (24 meters or more in length), or vessels using a combination of those gears, require the VMS to be turned on both inside and outside the Inter-American Tropical Tuna Commission (IATTC) Convention Area with a ping rate of one per hour, the VMS units may be turned off in port with notification to NMFS, and there may be Federal funds for reimbursement of the purchase cost.

Mr. Helvey confirmed her presumptions. However, with regard to reimbursement, Mr. Helvey noted that previously a subsidy of up to \$3,100 per vessel was available through PSMFC to subsidize purchase of VMS units. They have not contacted PSMFC to confirm what funds may now be available.

Mr. Crabbe asked about whether albacore vessels could turn off the VMS unit when not targeting albacore. Mr. Helvey replied that after consultation with OLE it was determined that the units would have to be turned on at all times. Mr. Crabbe noted the purse seine fleet targets tuna infrequently and Mr. Helvey said these vessels would have to make a declaration at the

beginning of each year as to whether they will target tuna. If so, the VMS would have to be on at all times during that year.

Dr. McIsaac asked if another resolution could be advanced at the IATTC that would supersede the current requirement and exempt vessels such as those the Council has been talking about.

Mr. Hogan replied at the Regional Fishery Management Organizations level the U.S. has been advocating for effective monitoring and wants to demonstrate U.S. compliance. Other countries' purse seine fleets have already complied with the VMS requirement. In particular, Mexico has been asking why the U.S. has not complied with the requirement yet when they have implemented a comprehensive program that covers all their coastal fleets. He also emphasized the resolution does not prescribe any particular gear type with respect to applicability.

Ms. Lowman asked if any other countries have exempted any of their fleets from the requirement. Mr. Hogan described the IATTC compliance monitoring process. It involves self-reporting by members and all other members state they are in compliance.

Ms. Kirchner expressed concern this requirement could eventually apply to all albacore troll vessels. Mr. Hogan suggested this could be discussed further at the IATTC, but the U.S. could block any future resolution that expands the VMS requirement.

Dr. McIsaac noted this was the opportunity for the Council to comment on the rule if they wanted any changes. No comment would mean the regulation would be implemented as proposed.

Ms. Culver recalled the Council had expressed their preference for this regulation to be implemented under the MSA, but this wasn't feasible given the Council's schedule in the second half of 2013. She asked NMFS and the State Department to take note of the points raised during today's discussion.

While recognizing the timing issues with regard to implementing this regulation, Ms. Lowman hoped that this circumstance would not be repeated.

K.3 Recommendations for International Management Activities (3/12/2014; 11:26 a.m.)

K.3.a Agenda Item Overview

Dr. Kit Dahl presented the Agenda Item Overview and introduced the following attachments:

- Agenda Item K.3.a, Attachment 1: Summary of Conservation and Management Measures adopted by the Western and Central Pacific Fisheries Commission;
- Agenda Item K.3.a, Attachment 2: Letter from Dr. Donald McIsaac to Mr. Michael Tosatto, Council Recommendations to the U.S. Delegation to the Ninth Meeting of the Northern Committee; and
- Agenda Item K.3.a, Attachment 3: Precautionary Management Framework for North Pacific Albacore (USA Concept Paper), Attachment G to the Summary Report of the Ninth Regular Session of the Northern Committee.

K.3.b Reports and Comments of Advisory Bodies and Management Entities

Mr. Doug Fricke presented Agenda Item K.3.b, Supplemental HMSAS Report.

K.3.c Public Comment

Mr. Peter Flournoy, American Fisherman Research Foundation, San Diego, California.

Mr. Doug Fricke, Albacore Fisherman, Hoquiam, Washington.

K.3.d Council Action: Provided Guidance for the Development of the Precautionary Framework for the North Pacific Albacore Tuna Management, Including Biological Reference Points and Discussion Rules (3/12/2014; 12:59 PM)

Dr. McIsaac provided introductory comments on the development of the precautionary framework since June 2013. He highlighted the information that was forwarded to the U.S. delegation to the Northern Committee, in particular the framework for determining biological reference points.

Mr. Brizendine asked when the Council should provide additional guidance. Dr. McIsaac said there may not be substantial progress at the international level until the next Northern Committee meeting. He suggested the Council comment on whether to advance these concepts at the IATTC and to flag any elements of the proposed framework they are not comfortable with.

Mr. Wolford said he was having difficulty providing input given the lack of advice from the Highly Migratory Species Management Team (HMSMT).

Mr. Helvey noted the material forwarded to the U.S. delegation in August 2013 was based on the June 2013 HMSMT Report. The material in Agenda Item K.3.a, Attachment 2 is intended to capture Council intent as expressed in June 2013. The U.S. discussed these ideas with the Canadian delegation at the Northern Committee meeting; because of differences over an appropriate F-limit reference point, the U.S. presented the Concept Paper distributed here as Attachment 3. He noted the advice in the Supplemental HMSAS Report could be addressed going forward.

Mr. Pollard also expressed concern about the lack of information available to the Council, which prevents substantive input. Mr. Helvey suggested the Council focus on the biological reference points and decision rule elements of the framework. More input is also needed on the identification of appropriate management measures. Mr. Pollard responded the framework should be further refined to highlight key decision points, especially biological reference points, before the Council weighs in.

Dr. Dahl discussed how the USA Concept Paper had been formulated with respect to biological reference points and decision rules. He pointed to information in the June 2013 HMSMT and SSC Reports that supports the identification of specific reference points.

Mr. Brizendine noted the need to continue work on this so that North Pacific albacore continues to receive attention at the international level. Mr. Pollard concurred, emphasizing the need for a process that will lead to the selection of reference points.

Mr. Anderson agreed with previous comments about the lack of information for Council decision making on this. He asked if the Council's objective here is to influence the positions of the U.S. delegation. While at the international level North Pacific albacore may be a lower priority compared to other HMS, it is important that a precautionary management framework is developed that does not cause a disproportionate impact to U.S. harvesters and that all countries can agree to. In particular, the current differences with Canada need to be resolved.

Dr. Dahl asked if the Council concurred the precautionary management framework concepts should be next advanced through the U.S. delegation to the upcoming IATTC meeting.

Mr. Pollard confirmed working in the IATTC arena is a good next step and summarized Council discussion by saying the Council supports precautionary management that does not place a disproportionate conservation burden on U.S. harvesters.

K.4 U.S. – Canada Albacore Treaty Update (3/12/2014; 1:30 PM)

K.4.a Agenda Item Overview

Dr. Kit Dahl presented the Agenda Item Overview.

K.4.b Reports and Comments of Advisory Bodies and Management Entities.

Mr. Mark Helvey presented information from Agenda Item K.4.b, NMFS Report.

Mr. Brizendine and Mr. Hogan commented on the Treaty meeting from February 2014, Agenda Item K.4.b, Government of Canada Report on the 2013 Fishing Season.

Mr. Doug Fricke presented Agenda Item K.4.b, Supplemental HMSAS Report.

K.4.c Public Comment

Agenda Item K.4.c, Supplemental Public Comment: Letter to Chair Lowman regarding the U.S. Canada Albacore Treaty – Joint Position of Albacore Harvesters.

Mr. Peter Flournoy, American Fisherman's Research Foundation, San Diego, California.

Mr. Joel Kawahara, CTA, Quilcene, Washington and provided Agenda Item K.4.c, Supplemental Public Comment 2: Ellensburg Washington, Daily Record Dated Sept 5, 1979.

Mr. Jeremy Brown, Fisherman, Bellingham, Washington.

K.4.d Council Action: Adopt, as Necessary, Recommendations for the Fishery Regime Pursuant to the U.S. – Canada Albacore Treaty

Mr. Pollard and Mr. Anderson expressed their concern about discussing issues that might impinge on a U.S. negotiating position in a public forum. However, NOAA GC said the criteria for what can be discussed in closed session does not extend to these topics.

LCDR Casad commented on USCG interactions with the albacore fleet during the 2013 season, stating they did not hear of any problems with aggressive behavior by Canadian vessels during the last fishing season.

Mr. Anderson said he did not see a need for the Council to make any additional recommendations on a U.S. position for the upcoming treaty negotiations. He also pointed out that Mr. Hogan has been an effective negotiator and works closely with industry representatives during the negotiations. Mr. Crabbe agreed the State Department is reflecting the desires of the industry.

Mr. Pollard thanked Mr. Hogan for participating in the Council meeting.

Mr. Hogan described the State Department perspective with respect to the negotiations, including input from industry and the context within which these negotiations are taking place. He thinks the issues at hand are broadly similar to last year so previous Council recommendations are still relevant.

K.5 Drift Gillnet Monitoring, Management, and Alternative Gear Report (3/12/2014; 2:25 p.m.)

K.5.a Agenda Item Overview

Dr. Kit Dahl presented the Agenda Item Overview and introduced:

- Agenda Item K.5.a, Attachment 1, 78 FEDERAL REGISTER 54548, September 4, 2013, Temporary Rule, Emergency Action; and
- Agenda Item K.5.a, Supplemental Attachment 2: Letter from SWFSC Regarding Recent comments by Turtle Island Restoration Network on NOAA Fisheries Swordfish Research and Collaborative Fisheries Research (CFR) West Project.

K.5.b Reports and Comments of Advisory Bodies and Management Entities.

Mr. Mark Helvey presented information from Agenda Item K.5.b, NMFS Report: Recommendations from the Pacific Offshore Cetacean Take Reduction Team to Minimize Sperm Whale Interactions in the West Coast Swordfish Drift Gillnet Fishery.

Ms. Liz Hellmers presented Agenda Item K.5.b, Supplemental NMFS Report 2: Pacific Offshore Take Reduction Team (TRT) Recommendations and Implementation Plan.

Dr. Russ Vetter presented Agenda Item K.5.b, NMFS SWFSC Report, Alternative Gear Research Update (PowerPoint).

Dr. Chukey Sepulveda presented PFMC Research update Agenda Item K.5.b, Supplemental NMFS Report 3: Letter to Assembly Member Stone from NMFS West Coast Region.

Mr. Craig Heberer and Dr. Stephen Stohs presented Agenda Item K.5.b, HMSMT Report on Drift Gillnet Management and Agenda Item K.5.b, Supplemental HMSMT Report 2: Drift Gillnet Monitoring, Management, and Alternative Gear Report.

Mr. Doug Fricke and Mr. Steve Fosmark presented Agenda Item K.5.b, Supplemental HMSAS Report.

K.5.c Public Comment

Agenda Item K.5.c, Public Comment: Letters and Additional Signatories Regarding Drift Gillnet Fisheries.

Agenda Item K.5.c, Supplemental Public Comment 2.

Agenda Item K.5.c, Supplemental Public Comment 3: Exposing California's Dirty Little Secret: The truth about Drift Gillnets off our Coast (publication from Oceana).

Agenda Item K.5.c, Supplemental Public Comment 4: End the Walls of Death: Replace Devastating drift Gillnets off California with Cleaner Fishing Gear (publication from Oceana).

Mr. Peter Flournoy, American Fishery Research Foundation, San Diego, California.

Mr. David McGuire, Shark Stewards, Sausalito, California.

Ms. Teri Shore, Turtle Island Restoration Network, California Agenda Item K.5.c, Supplemental Public Comment PowerPoint 3: California's Driftnet Fishery for Swordfish and Shark – California's Deadliest Catch (TIRN).

Mr. Steve Marx, PEW Charitable Trusts, Portland, Oregon.

Mr. Greg Helms, Ocean Conservancy.

Mr. Bill Sutton, Ojai, California.

Mr. August Felando, San Diego, California.

Mr. Tim Mulcahy, San Diego, California.

Mr. Steve Fosmark, Pebble Beach, California.

Ms. Kathy Fosmark, ACSF, Pebble Beach, California.

Mr. Arthur Lorton, Fisherman, California.

Mr. Steve Miniz, San Diego, California.

Mr. Ben Enticknap, Oceana, Portland, Oregon, presented Agenda Item K.5.c, Supplemental Public Comment PowerPoint 2.

Mr. Ken Hinman, Wild Oceans, Waterford, Virginia.

Mr. Gary Burke, F/V TYTAN, Santa Barbara, California, presented Agenda Item K.5.c, Supplemental Public Comment PowerPoint: Pacific drift gillnet proposal.

Ms. Melissa Stevens, The Nature Conservancy, Santa Cruz, California.

K.5.d Council Action: Provide Guidance on Potential Changes in the Drift Gillnet Fishery (3/13/2014; 8:02 a.m.)

Mr. Lincoln began with an overview of the issues before the Council. There is interest in expanding the swordfish fishery beyond current levels if bycatch can be limited. Various approaches and methods have been presented to provide harvest opportunities while minimizing bycatch. This is part of ongoing discussions by the Council on how to transition the swordfish fishery and the focus should stay on these dual objectives.

Mr. Lincoln supports extending the current temporary emergency rule until the permanent regulation implementing Pacific Offshore Take Reduction Team (POCTRT) recommendations is implemented in order to reduce uncertainty about the interim regulatory environment.

Mr. Lincoln continued by arguing the Council should not pursue measures to relax the current Pacific Loggerhead Conservation Area (PLCA) time/area closure except to fine-tune the existing regulations. Instead the Council should focus on transitioning the fishery, including opportunities for them to transition to new gears. Public testimony recommended further

development of alternative gear types through the EFP process. The HMSMT should develop criteria for reviewing those types of proposals, especially in terms of transitioning from research to a fishery opportunity.

Mr. Lincoln said transferring permitting authority from state to federal should be premised on its relevance to the overall goal of transitioning the fishery. Currently, he does not see a compelling need to change the permitting regime, given the workload involved in developing a federal limited access permit.

Mr. Crabbe said although at this time it's not clear that moving to a federal permit would be beneficial, he thinks the Council should have the information to consider it. Therefore Council staff or the HMSMT should be asked to report back to the Council with an evaluation of moving to a federal permit. The timing can be discussed under Agenda Item J.4, Future Meeting Agenda and Workload Planning.

Mr. Wolford agreed with the previous comments but thought it would be more efficient to have NMFS develop the transition plan. He noted California may force the Council's hand by passing legislation prohibiting the fishery at the state level. The Council should be prepared with an appropriate response if necessary, in order to transition the fishery. He pointed out the swordfish stock is healthy and the issues surround protected species bycatch. Alternative gears are probably needed to meet the legal standards on protected species bycatch. The Council should consider federal management from the perspective of the resource and the fisherman.

Mr. Feldner agreed with the comments made so far and would like the Council to be prepared if the state action to prohibit the fishery happens. He reviewed some of the ongoing work reported to the Council to address bycatch in this fishery.

Mr. Ortmann talked about the need for sustainable domestic U.S. fisheries and voiced his support for gathering information on transferring the permitting of the drift gillnet fishery to the federal level.

Ms. Kirchner expressed concern about the workload involved in investigating a federal permit and transitioning to alternative gear types simultaneously given the same staff would likely be involved in both tasks.

Mr. Helvey recommended the HMSMT develop the alternative gear protocols while NMFS investigates the process for developing a federal permitting regime in cooperation with state colleagues.

Ms. Kirchner asked about the process for reviewing EFPs and Mr. Helvey responded any guidelines and protocols would need to be developed first, and would speed the implementation process.

Dr. McIsaac pointed to Agenda Item J.4.a, Attachment 1, Pacific Council Workload Planning: Preliminary Year-at-a-Glance Summary, noting both preliminary review of HMS EFPs and the routine management process begin at the June Council meeting. The assignments discussed so far could dovetail nicely for consideration at the June Council meeting.

Mr. Anderson commented on several of the discussion items. On the one hand, the Council could accept the status quo, perhaps with some additional regulations to minimize bycatch to the maximum extent practicable while waiting to see whether California legislation banning the fishery passes. Under this path the Council would need to accept this gear type would be a part of the future of the swordfish fishery. The Council decisions then focus on fishery transition issues and protected species bycatch reduction. Notwithstanding, if the California legislation passes, a federal permit program may need to be established. No matter what happens in the short term, the Council should support extending the temporary emergency rule while NMFS promulgates the permanent rule. On the other hand, if the long-term plan is end the use of drift gillnet (DGN) gear, then viable alternative gear types need to be developed through issuing EFPs. Mr. Anderson advocates this latter path. DGN fishermen should understand the Council's intent to transition the fishery to other gear types. He recommends the HMSMT work with industry on developing a transition plan.

Ms. Yaremko commented although the fishery operates under a California state permit program, it occurs in federal waters and is federally managed. The fishery existed before the HMS FMP was implemented and federal management of some aspects of the fishery predate the FMP, such as closures and gear restrictions to address ESA concerns, and implementing POCTRT recommendations. Under the HMS FMP there has been documentation under NEPA and the stock assessment and fishery evaluation reports to support managing the fishery under MSA.

Ms Yaremko continued, saying there should be a report from NMFS on the permit issue. She noted there is currently a federal HMS permit with a DGN gear endorsement, although the number of permits is currently not limited. She supports NMFS investigating the feasibility of modifying the existing federal HMS permit and an analysis of the legal issues involved in converting these HMS permits to a federal limited access program. The design of a permit scheme should include consideration of future adjustments to the scheme. In this regard, the HMSMT should develop criteria for capping the number of permits that would be issued in the future.

Mr. Wolford recommended developing an action plan for this permit proposal, which might involve publishing a control date. Dr. McIsaac said there should be advance public notice of any plan to transition the permit scheme to federal authority and Mr. Wolford concurred.

Mr. Helvey said a control date is unnecessary, because participation in the fishery is already limited. Ms. Yaremko countered the need for a control date for a new federal limited access permit is an open question and this is something the HMSMT should investigate.

Ms. Kirchner discussed her support for Mr. Anderson's comments on developing a transition plan that emphasizes sustainability and continued participation in the swordfish fishery.

Mr. Brizendine said he supports the idea of moving permitting to the federal level. While he supports the alternative gear types currently in development, he doesn't see them as a near-term solution. The Council should also pursue measures such as increased observer coverage and hard caps for the existing DGN fishery so participants can fish cleanly.

Mr. Crabbe discussed the uncertainty about the future of the DGN fishery because of the proposed California legislation to prohibit the fishery. This makes it hard to develop a transition plan. Mr. Wolford responded this underscores the need to move the fishery fully under federal management, including any measures necessary to make the fishery environmentally viable.

Mr. Anderson thinks this transition should be considered independent from the California legislation. However, Washington prohibits the gear and Oregon has stopped issuing permits; if the California legislation passes it would be prohibited in all three states. This would produce federal-state conflicts, so that wouldn't be solved by a federal permit.

Ms. Lowman sought to summarize Council guidance: NMFS should extend the temporary emergency rule and promulgate the permanent rule, the HMSMT should develop criteria for evaluating alternative gear EFPs; and NMFS and the HMSMT should identify the issues surrounding a transition to a federal permit scheme. She didn't think there was consensus that the transition to a federal permit should begin now, rather the Council would like to receive more information about it.

Mr. Feder noted a California state attorney told him the California legislation would only apply in state waters and does not include a landing prohibition. Since the fishery occurs in the Exclusive Economic Zone outside state waters he doesn't see a preemption issue. He also noted there are already federal permits, but they are not limited.

Dr. Hanson reviewed the efforts that DGN fishermen have made to reduce bycatch in relation to POCTRT recommendations. He emphasized some bycatch is unavoidable; there is no such thing as a totally clean fishery. He recommended the Council develop a better understanding of Marine Mammal Protection Act provisions. While he agrees the Council needs to decide whether or not to move forward with a transition to alternative gears, he doesn't think that the alternative gears under development can substitute for DGN, so efforts to make DGN more sustainable should be supported.

Mr. Sones said he supports continued research to make this a cleaner fishery. This knowledge developed through federal management could be exported to gillnet fisheries in other countries rather than simply banning imports of fish caught in these fisheries.

Mr. Crabbe discussed how the right incentives can motivate fishermen to reduce bycatch, citing the groundfish trawl program as an example.

Mr. Wolford said 100 percent observer coverage is crucial and the use of electronic monitoring technology for this fishery (especially for unobservable boats) should be investigated.

Mr. Helvey recommended the HMSMT and the HMSAS be tasked with investigating funding mechanisms for and alternatives to 100 percent observer coverage.

Dr. McIsaac summarized what he had heard so far. The Council recommends NMFS extend the temporary emergency rule. The Council did not recommend any changes to the current PLCA time/area closure. EFPs for alternative gears will be considered at the June Council meeting. Other ideas that were raised, including transitioning to a federal permit and additional bycatch

reduction measures, would be considered as part of the biennial management measures process scheduled for the June, September, and November Council meetings.

Ms. Lowman asked for consensus on the last issue Dr. McIsaac mentioned.

Ms. Yaremko said the previously discussed reports from NMFS and the HMSMT will be provided at the June Council meeting. Mr. Wolford asked for a status report at the April meeting as part of a NMFS Report. Dr. McIsaac noted the short time leading up to the next meeting, so only a brief status update might be possible. However, there is also a three-meeting process agenda item to develop these ideas.

Ms. Kirchner said in balancing workload, her preference would be to focus on alternative gear development and bycatch reduction research rather than the permit issue.

Mr. Helvey noted the Council seat on the POCTRT is currently vacant and recommended it be filled. He also mentioned the HMS FMP is incomplete with respect to authorizing shallow-set longline gear and is an item for future Council consideration.

Mr. Anderson asked what information the Council would receive in June. Mr. Helvey described the work NMFS would do investigating a transition to federal permitting and noted the HMSMT will develop alternative gear research protocols, investigate the need for a control date, and develop a metric to determine the number of currently active participants in the DGN fishery.

With regard to research protocols, Mr. Helvey commented in public testimony Wild Oceans provided recommendations for research protocols for alternative gear.

Mr. Anderson asked if the Council was advocating for the status quo path of investigating how to make the existing gear viable.

Dr. McIsaac said he heard the Council recommending the HMSMT develop a transition plan that would cover all the options that have been discussed, including a federal permit and eventually moving to other gear types. At the same time, soliciting EFP proposals would provide an immediate information gathering opportunity. The Council would publish a public notice soliciting proposals for alternative gear EFPs, which the Council would consider in June.

ADJOURN

The Council adjourned March 13, 2014 at 1:15 p.m. following completion of Agenda Item J.4.

Dorothy Lowman
Council Chair

Date

DRAFT VOTING LOG
Pacific Fishery Management Council
222nd Meeting
March 2014

Motion 1: Adopt Agenda Item A.4: Proposed Council Meeting Agenda, March 2014.

Moved by: David Crabbe Seconded by: Herb Pollard
Motion 1 carried unanimously.

Motion 2: Adopt the 2014 stock abundance forecasts, ABCs, and ACLs as shown in Supplemental Preseason Report 1, February 2014, as presented.

Moved by: Herb Pollard Seconded by: Phil Anderson
Motion 2 carried unanimously.

Motion 3: Adopt for use in 2014 management, the objectives contained in Agenda Item F.2.c, Supplemental WDFW/Tribal Report and Agenda Item F.2.c, Supplemental WDFW/Tribal Report 2.

Moved by: Phil Anderson Seconded by: Rich Lincoln
Motion 3 carried unanimously.

Motion 4: Approve discard mortality rates for cowcod, canary, and yelloweye as shown in Table 1, page 2 of D.3.b, Supplemental GMT Report 2 (March 2014), using the 75 percent confidence interval.

Moved by: Dan Wolford Seconded by: Buzz Brizendine

Amendment 1: Change the 75 percent confidence interval to the 90 percent confidence interval.

Moved by: Michele Culver Seconded by: Rich Lincoln
Amendment 1 carried: 8 yes, 5 no (Mr. Wolford, Ms. Grebel, Mr. Feldner, Mr. Brizendine and Mr. Crabbe voted no).
Motion 4 carried unanimously.

Motion 5: Recommend NMFS issue the surplus carryover in the shorebased IFQ program from 2013 to 2014 based on preliminary data for all non-whiting IFQ species, including sablefish north of 36° N. latitude and petrale sole; and to release the full amount up to 10 percent.

Moved by: Dale Myer Seconded by: Dorothy Lowman
Motion 5 carried, Mr. Lockhart abstained.

Motion 6: Include Agenda Item F.4.c, Supplemental EC Report in the range of alternatives.

Moved by: Marci Yaremko Seconded by: Dan Wolford
Motion 6 carried unanimously.

Motion 7: Adopt the OFL for cowcod south of 40° 10' N. latitude as referenced in Agenda Item D.5.a, Attachment 1, Table 1.

Moved by: Joanna Grebel Seconded by: David Crabbe
Motion 7 carried unanimously.

Motion 8: Adopt the OFL for kelp greenling off of Washington for 2015 of 31.4 mt and an OFL for 2016 that corresponds to a P* value of 0.4; and approve the ABC for kelp greenling off Washington for 2015 and 2016 corresponding with a P* value of 0.4.

Moved by: Michele Culver Seconded by: Rich Lincoln
Motion 8 carried unanimously.

Motion 9: Adopt an OFL for kelp greenling off of Oregon for 2015 of 14.0 mt and a P* value of 0.45; an OFL for 2016 of 15.5 mt with a P* of 0.45; and a 2015-2016 ABC that correspond to a P* of 0.45.

Moved by: Troy Buell Seconded by: Jeff Feldner
Motion 9 carried unanimously.

Motion 10: Adopt for analysis the alternatives shown in Agenda Item D.6, Situation Summary:

- No Action Alternative (Status quo): Beginning in 2014, the QP associated with the QS set-aside for AMP purposes will be distributed in accordance with procedures developed under the AMP provisions. If such procedures are not developed and implemented by January 1, 2014, there is no guidance on how the AMP QP will be distributed.
- Strawman Alternative 1: The pass-through procedures used since 2011 will be continued through 2017.
- Strawman Alternative 2: The pass-through procedures used since 2011 will be continued until procedures are developed under the AMP.

Moved by: Dorothy Lowman Seconded by: Dave Ortmann
Motion 10 was withdrawn with consent of the second.

Motion 11: Adopt for analysis the following alternatives:

1. No Action Alternative (Status quo): Beginning in 2015, the QP associated with the QS set-aside for AMP purposes will be distributed in accordance with procedures developed under the AMP provisions.
2. Alternative 1: The AMP QP allocation procedures will be considered as part of the five-year review and the pass-through procedure used since 2011 will be continued
 - a. Sub-option A: through 2017.

- b. Sub-option B: Until the implementation of regulations resulting from the five-year review.
3. Alternative 2: The pass-through procedures used since 2011 will be continued until procedures are developed under the AMP.

Moved by: Dorothy Lowman Seconded by: Dave Ortmann
Motion 11 carried unanimously.

Motion 12: Recommend inseason action to modify the April 1-30, 2014 incidental Pacific halibut catch regulations as provided in Agenda Item G.2.b, Supplemental SAS Report which states that license holders may land no more than one Pacific halibut per each four Chinook, except one Pacific halibut may be landed without meeting the ratio requirement, and no more than 12 halibut landed per trip.

Moved by: Gway Kirchner Seconded by: Jeff Feldner
Motion 12 carried unanimously.

Motion 13: Adopt for public review, the range of Pacific halibut restrictions for the salmon troll fishery from May 1, 2014 to December 31, 2014 and April 1-30, 2015 as shown in Agenda Item G.2.b, Supplemental SAS Report.

Moved by: Gway Kirchner Seconded by: Phil Anderson
Motion 13 carried unanimously.

Motion 14: Adopt an incidental halibut retention allowance for the commercial sablefish fishery north of Point Chehalis, Washington of 75 lbs dressed weight of halibut for every 1,000 lbs dressed weight of sablefish landed and up to 2 additional halibut in excess of the 75-lbs-per-1,000-pound ratio per landing.

Moved by: Phil Anderson Seconded by: Gway Kirchner
Motion 14 carried unanimously.

Motion 15: Council to:

1. Replace the existing SIO temperature index with the CalCOFI temperature index for purposes of determining both OFL FRACTION and HG FRACTION.
2. In order to accommodate regulatory amendment timelines, for 2014-15 fishing season only, the CalCOFI index shall be used for purposes of determining OFL, while the SIO index would need to be used for purposes of calculating the HG FRACTION.
3. Accept the SSC Recommendation (Agenda Item I.1.c, Supplemental SSC Report) that the OFL for the northern subpopulation of Pacific sardine be based on an Emsy proxy derived from the relationship between estimated Emsy and the 3-year moving average of the CalCOFI Temperature index, restricted to an OFL FRACTION (or Emsy) range of 0-25 percent.
4. Evaluate additional alternatives for a HG FRACTION (or Emsy) of 0-20 percent and 5-20 percent based on the 3-year moving average of the CalCOFI

temperature index, which preserves current policy by allowing higher harvest rates in periods of high biomass and productivity, but constrains harvest rates when biomass and productivity are low.

5. Direct the CPSMT to move to other priority needs while continuing to routinely advise the Council as to whether the sardine control rules are achieving the CPS-FMP goals identified in both the CPSMT and supplemental CPSAS reports (Agenda I.1.c).

Moved by: Marci Yaremko

Seconded by: Michele Culver

Amendment 1: Insert in item 4: direct the CPSMT to evaluate additional alternatives in sufficient time for implementation for the July 1, 2015 fishery start date.

Moved by: Michele Culver

Seconded by: Marci Yaremko

Amendment 1 carried unanimously. Motion 15, as amended, carried unanimously.

Motion 16: Adopt for public review the three alternatives for the commercial and recreational fisheries North of Cape Falcon as prescribed in Agenda Item F.6.b, Supplemental STT Report, dated March 13, 2014 with the following modifications:

1. Page 12, Alternative 1, change the bag limit from “All Salmon; two fish per day” to “All salmon; two fish per day, no more than one of which can be a Chinook.”
2. Page 12, Alternative 3, change five days per week to seven days per week.

Moved by: Phil Anderson

Seconded by: Rich Lincoln

Motion 16 carried unanimously.

Motion 17: Adopt the three treaty ocean troll salmon season alternatives for public review as they are presented in Table 3 of Agenda Item F.6.b, Supplemental STT Report, March 13, 2014 on pages 19-20:

- Alternative I– quota levels of 67,500 Chinook and 60,000 coho
- Alternative II- quota levels of 62,500 Chinook and 55,000 coho
- Alternative III – quota levels of 55,000 Chinook and 47,500 coho

The salmon season will consist of a May/June chinook directed fishery and a July/August/September all-species fishery. The Chinook harvest will be split between the two periods with the following sub quotas:

Alternative I – 40,500; Alternative II – 36,250; Alternative III – 27,500 for the May/June/Chinook directed fishery and the remainder in each alternative for the July/August/September all species fishery.

The tribes would like to request model runs be done on each of the three alternatives with what the tribes are proposing for Mid-Puget Sound age-2 Chinook recruit scalars and with what the WDFW is calling the “old” version. This would be a total of six model runs.

For the record, the tribes and state are just beginning the North of Falcon planning process in which we will evaluate the total impacts of all proposed fisheries on Puget Sound and Columbia River stocks.

Moved by: David Sones Seconded by: Bob Turner
Motion 17 carried unanimously.

Motion 18: Adopt for public review the alternatives for non-Indian commercial and recreational fisheries between Cape Falcon and the Oregon/California border presented in Agenda Item F.6.b, Supplemental STT Report (March 13, 2014) with the changes described in Agenda Item F.6.b, Supplemental ODFW Report.

Moved by: Gway Kirchner Seconded by: Jeff Feldner
Motion 18 carried unanimously.

Motion 19: Adopt for public review the alternatives for non-Indian commercial and recreational fisheries south of the Oregon/California border as presented in Agenda item F.6.b, Supplemental STT Report (March 13, 2014).

Moved by: Marci Yaremko Seconded by: David Crabbe
Motion 19 carried unanimously.

Motion 20: Write a letter to NMFS in response to the request for comments on the winter-run rule and endorse the use of control rule #4 per the assessment by the SAS; further, include in the letter the acknowledgment that the fishery is not the only source of impact on winter-run and encourage NMFS to address the issues of being “fair and equitable” with other parties who have similar or greater impact than the Council fisheries do.

Moved by: David Wolford Seconded by: Marci Yaremko
Motion 20 carried unanimously.

Motion 21: Approve the draft minutes as presented for the September 2013 Council meeting (Agenda Item J.2.a, Attachment 1), with the identified corrections.

Moved by: David Ortmann Seconded by: Herb Pollard.
Motion 21 carried unanimously.

Motion 22: Appoint Dr. Galen Johnson to fill the tribal government seat on the Scientific and Statistical Committee and to appoint Mr. Kris Northcut to fill the tribal government seat on the Highly Migratory Species Management Team.

Moved by: David Sones Seconded by: Bob Turner
Motion 22 carried unanimously.

Motion 23: Appoint Ms. Melodie Palmer-Zwahlen to fill the California Department of Fish and Wildlife seat on the Salmon Technical Team.

Moved by: Marci Yaremko Seconded by: Dan Wolford
Motion 23 carried unanimously.

Motion 24: Appoint Lieutenant Tim Schwartz to fill the Oregon State Patrol seat on the Enforcement Consultants.

Moved by: Gway Kirchner Seconded by: Jeff Feldner
Motion 24 carried unanimously.

Motion 25: Appointed Dr. John Stadler to fill the West Coast Region seat on the Habitat Committee, and to designate Ms. Korie Schaeffer as his alternate.

Moved by: Bob Turner Seconded by: Herb Pollard
Motion 25 carried unanimously.

GULF OF THE FARALLONES AND CORDELL BANK
NATIONAL MARINE SANCTUARY BOUNDARY EXPANSION

The National Oceanic and Atmospheric Administration (NOAA) is proposing an expansion of the boundaries of Cordell Bank National Marine Sanctuary and Gulf of the Farallones National Marine Sanctuary (CBNMS and GFNMS), pursuant to section 304(e) of the National Marine Sanctuaries Act. On April 14, 2014, four documents were published in the *Federal Register*: the Draft Environmental Impact Statement (DEIS) (Agenda Item C.2.a, Attachment 4), the proposed rule (Agenda Item C.2.a, Attachment 5), and the draft revised management plans for each sanctuary (Agenda Item C.2.a, Attachments 6 and 7). The comment period on these documents is open through June 30, 2014. Other background materials are also included in the briefing book: an informational flyer (Agenda Item C.2.a, Attachment 1), a list of Frequently Asked Questions (Agenda Item C.2.a, Attachment 2), and the Executive Summary excerpted from the DEIS (Agenda Item C.2.a, Attachment 3).

Ms. Maria Brown, Superintendent of the GFNMS, will be present to describe the need and plan for the proposed expansion; to summarize the draft EIS and proposed rule; and to answer questions from the Council.

Council Action:

1. Consider materials related to the proposed expansion.
2. Provide comments on the proposed expansion of the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries.

Reference Materials:

1. Agenda Item C.2.a, Attachment 1: Informational flyer.
2. Agenda Item C.2.a, Attachment 2: Frequently asked questions.
3. Agenda Item C.2.a, Attachment 3: Draft EIS on expansion of National Marine Sanctuaries, Executive Summary.
4. Agenda Item C.2.a, Attachment 4: Draft EIS on expansion of National Marine Sanctuaries, (***Electronic Only***).
5. Agenda Item C.2.a, Attachment 5: Proposed rule regarding plans for expansion of National Marine Sanctuaries (***Electronic only***).
6. Agenda Item C.2.a, Attachment 6: Draft Gulf of the Farallones Revised Management Plan (***Electronic Only***).
7. Agenda Item C.2.a, Attachment 7: Draft Cordell Bank National Marine Sanctuary Revised Management Plan (***Electronic Only***).
8. Agenda Item C.2.d, Public Comment.

Agenda Order:

- a. Agenda Item Overview

Kerry Griffin

- b. Report from the National Marine Sanctuaries Maria Brown and Dan Howard
- c. Reports and Comments of Advisory Bodies and Management Entities
- d. Public Comment
- e. **Council Action:** Provide Comments on the Proposed Expansion of the Gulf of the Farallones and Cordell Bank National Marine Sanctuary Boundaries

PFMC
05/28/14

Agenda Item C.2.a

Comment on the proposed expansion of Cordell Bank and Gulf of the Farallones National Marine Sanctuaries Attachment 1
June 2014

NOAA is proposing to expand the boundaries of Cordell Bank National Marine Sanctuary (CBNMS) and Gulf of the Farallones National Marine Sanctuary (GFNMS) to an area north and west of their current boundaries, as well as to amend existing sanctuary regulations and add new regulations. NOAA is also proposing to revise the corresponding sanctuary terms of designation and management plans. The purpose of this action is to extend sanctuary protections to an area that has nationally significant marine resources and habitats and is ecologically linked with existing sanctuaries. NOAA is soliciting public comment on the proposed rule, draft environmental impact statement, and revised CBNMS and GFNMS management plans.

For more information and to download the documents visit:

http://farallones.noaa.gov/manage/expansion_cbgf.html

Provide Public Comment (Comment Deadline June 30, 2014)

There are three ways to submit your comments:

1. Electronic Submission: Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to www.Regulations.gov and search for docket NOAA-NOS-2012-0228. Click on the appropriate "Comment Now!" icon, complete the required fields, and enter or attach your comments. If you have comments on more than one of the documents, you can record them by individual document (preferred) or as a combined comment on any of the four documents. All comments will be considered.

2. Mail: Maria Brown, Sanctuary Superintendent, Gulf of the Farallones National Marine Sanctuary, 991 Marine Drive, The Presidio, San Francisco, CA 94129. If you wish to remain anonymous on comments submitted via mail, please state so at the beginning of your comments.

3. Attend a Public Hearing:

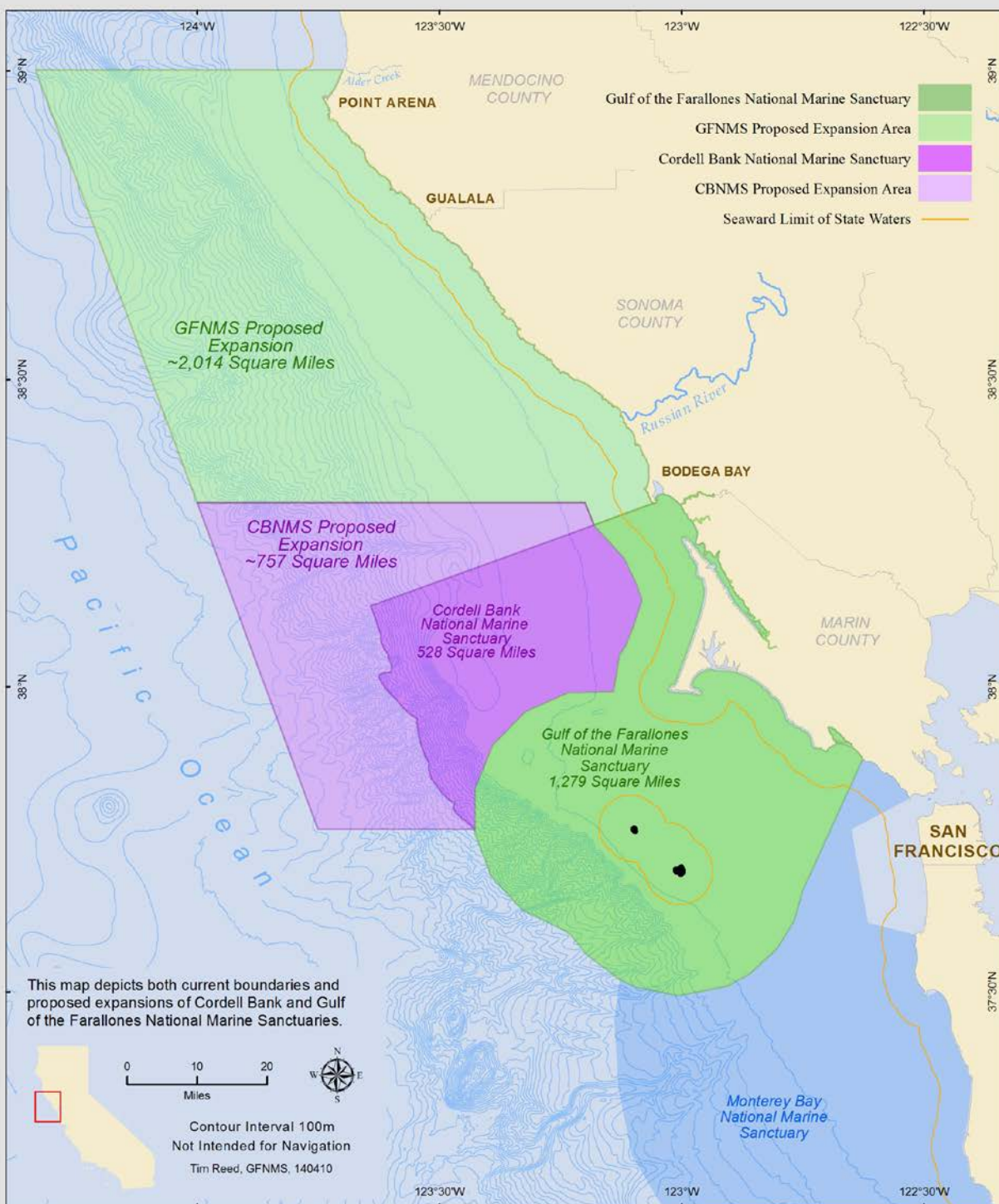
Sausalito, CA Thursday, May 22, 2014 U.S. Army Corps of Engineers Bay Model Visitor Ctr. 2100 Bridgeway Blvd., Sausalito, CA 94965 6 pm	Gualala, CA Tuesday, June 17, 2014 Gualala Community Center 47950 Center St., Gualala, CA 95445 6 pm
Point Arena, CA Monday, June 16, 2014 Point Arena City Hall 451 School St., Point Arena, CA 95468 6 pm	Bodega Bay, CA Wednesday, June 18, 2014 Grange Hall 1370 Bodega Ave., Bodega Bay, CA 94923 6 pm

PROPOSED EXPANSION

Gulf of the Farallones National Marine Sanctuary

Cordell Bank National Marine Sanctuary

April 2014



CBNMS and GFNMS National Marine Sanctuaries Frequently Asked Questions about Proposed Sanctuary Expansion

Q1: What action is NOAA Office of National Marine Sanctuaries proposing?

A: In response to public interest, NOAA Office of National Marine Sanctuaries has released a proposal for the expansion of Cordell Bank and Gulf of the Farallones national marine sanctuaries (CBNMS and GFNMS). This includes a proposed rule that outlines regulatory changes, a draft environmental impact statement and amended management plans for Cordell Bank and Gulf of the Farallones national marine sanctuaries.

Q2: Why is NOAA proposing this expansion of the sanctuaries?

A: The proposal aims to further protect the existing sanctuaries and the ecosystem off of the Marin, Sonoma and southern Mendocino County Coasts. This proposed boundary expansion encompasses the entire Point Arena upwelling system that consistently produces some of the most intense and productive upwelling in North America. The Point Arena upwelling center is ecologically linked with the current sanctuaries because the upwelling center provides nutrient rich water that is the foundation for the regionally rich food web that supports a dynamic and internationally important marine ecosystem, important commercial and recreational fisheries, and a flourishing tourist economy.

Q3: What is the size of the proposed sanctuary expansion area?

A: The proposed action would extend CBNMS west and north of the current boundaries in federal waters and would increase the size of CBNMS from 529 mi² to 1286 mi². The proposed action would extend GFNMS from Bodega Bay, Sonoma County to a point a few miles north of Point Arena lighthouse at Manchester State Park (at latitude 39° north) in southern Mendocino County, and would include state and federal waters. The area protected by GFNMS would increase from 1279 mi² to 3293 mi².

Q4: How long is the comment period and how may I provide comments?

A: The release of the proposal on April 14, 2014 begins a public comment period that will end June 30, 2014. The proposed expansion is a public process and we encourage you to comment on the proposed rule, the draft environmental impact statement and either of the draft revised management plans. The public may submit comments three ways:

1. Attend Public Hearings (see dates below)
2. Electronic Submission: Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to www.regulations.gov and search for docket NOAA-NOS-2012-0228. click the “Comment Now!” icon, complete the required fields, and enter or attach your comments.
3. Mail: Maria Brown, Sanctuary Superintendent, Gulf of the Farallones National Marine Sanctuary, 991 Marine Drive, The Presidio, San Francisco, CA 94129

Public Hearings

May 22, 2014

U.S. Army Corps of Engineers Bay Model Visitor Center, 6 pm
2100 Bridgeway Blvd., Sausalito, CA 94965

June 16, 2014

Point Arena City Hall, 6 pm
451 School St., Point Arena, CA 95468

June 17, 2014

Gualala Community Center, 6 pm
47950 Center St., Gualala, CA 95445

June 18, 2014

Grange Hall, 6 pm
1370 Bodega Ave., Bodega Bay, CA 94923

Q5: Why are you proposing this now?

A: NOAA is responding to requests from the Administration and the public to expand the boundaries of the two sanctuaries.

- In 2001, NOAA received public comment during the joint management plan review requesting GFNMS and CBNMS expand their boundaries to the north and west.
- In response, GFNMS and CBNMS revised management plans in 2008 included strategies to facilitate a public process for proposed expansion.
- Former California Representative Lynn Woolsey introduced legislation to expand the sanctuaries in every U.S. House of Representatives session from 2004- 2012. For much of this same time period, Senator Barbara Boxer offered companion legislation in the U.S. Senate.
- In accordance with the National Marine Sanctuaries Act, in 2012 NOAA initiated a review of the boundaries for CBNMS and GFNMS to evaluate and assess the environmental impacts of proposed expansion of the sanctuaries.
- NOAA is now proposing to expand the boundaries, amend the regulations and revise the management plans for GFNMS and CBNMS. NOAA is seeking public comment on this proposal.

Q6: Would there be any regulatory changes?

A: The proposed action would carry over some existing regulations into the expansion area, amend current regulations for GFNMS and CBNMS, and add new regulations. All regulatory information can be found in the Proposed Rule at www.regulations.gov. Search for docket NOAA-NOS-2012-0228.

Q7: Would there be there any restrictions on fishing activities?

A: The proposed expansion of the sanctuaries does not include any fishing regulations under the National Marine Sanctuaries Act.

- National marine sanctuaries work with diverse partners and stakeholders to promote responsible, sustainable ocean uses that ensure the health of our most valued ocean places.
- National marine sanctuaries have a long history of working with recreational and commercial fishermen and they offer resource protection while allowing compatible activities.
- Some of the most productive fisheries are within national marine sanctuaries.
- Fishing within the existing and proposed footprints for GFNMS and CBNMS will continue to be managed by California Department of Fish and Wildlife, and NOAA Fisheries with advice from the Pacific Fishery Management Council.

Q8: Are there restrictions proposed on oil and gas development?

A: Oil and gas exploration and development is prohibited in the existing sanctuaries, and the prohibition would be extended to the expanded sanctuary boundaries under this proposal. Extraction of minerals would be added to the oil and gas prohibitions in GFNMS.

Q9: Why is NOAA proposing to expand these two sanctuaries in uncertain budget times?

A: The management of an expanded site would rely on the existing staff and programs and would continue to be funded under the current budget.

- If these two national marine sanctuaries were expanded, once the decision became final, prohibitions that would provide added environmental protections, such as the prohibition on oil and gas development, would be immediate.

- NOAA will continue to evaluate future resource needs of all sanctuaries in its formulation of annual budget requests.
- If the sanctuary is expanded, we would work to strengthen community partnerships for education, outreach, research, resource protection, and enforcement. We would also partner with local, state and other federal agencies to leverage resources and implement programs.

Q10: How will the sanctuary rules affect low overflight over the proposed expansion area?

A: The proposed regulations for low overflights are designed to avoid disturbance of marine mammals and seabirds.

- Aircraft would be able to fly at any elevation above sea level throughout the sanctuary, except in two new zones within the expansion area that would prohibit flying lower than 1,000 feet. The total combined size of these zones would be approximately 24 square nautical miles (31.9 square miles). However, the time an aircraft would spend transiting over these zones is short.
- Zone 1 would extend south along the coast from Havens Neck approximately 10 miles to Del Mar Point, and from the Mean High Water Line approximately 1.75 miles seaward. The overflight time, lengthwise, would be about 200 seconds (3.33 minutes) for an aircraft traveling at 120 miles per hour. Zone 2 would extend south along the coast from Windermere Point approximately 14 miles to Duncans Point and from the Mean High Water Line approximately 1.85 miles seaward. The overflight time, lengthwise, would be about 375 seconds (6.25 minutes) for an aircraft traveling at 120 miles per hour.

Q11: Are there any restrictions proposed on offshore energy development?

A: There is no explicit proposed prohibition of offshore alternative, renewable energy development including wind, wave, solar or tidal. Should an offshore wind, wave, tidal, or other alternative energy project require placement of a structure on the submerged lands of the sanctuary, that activity would be prohibited. GFNMS and CBNMS may, however, issue permits for activities otherwise prohibited, should that activity meet the sanctuaries' permit issuance criteria for furthering research or monitoring, education, salvage, or assisting with the management of the sanctuary.

- The Bureau of Ocean Energy Management (BOEM) currently prohibits issuing renewable energy leases in sanctuary waters, however their jurisdiction encompasses offshore renewable energy development only in Federal waters outside of state waters. CBNMS is located solely in Federal waters. The proposed regulations for GFNMS would give the sanctuary the ability to authorize alternative energy projects, both within the existing boundaries and in the expansion area in state waters (outside of BOEM managed areas) if that project is permitted by another valid federal, state, or local lease, permit,

license, or approval, and if the project complies with terms and conditions determined by NOAA designed to best protect sanctuary resources and qualities.

Q12: *How will the sanctuary regulations be enforced in the expanded areas without additional resources?*

A: If GFNMS and CBNMS are expanded, NOAA would also continue to work with federal and state enforcement partners, both within the current boundaries and in the expansion area, to maintain on water and aerial surveillance, update patrol guides and regulatory handbooks, and conduct interpretive/outreach patrols.

EXECUTIVE SUMMARY

Background, Purpose and Need

This Draft Environmental Impact Statement (DEIS) is an evaluation of the potential environmental impacts of expanding the boundaries of Cordell Bank and Gulf of the Farallones national marine sanctuaries and establishing regulations for the management of the expanded sanctuaries. This DEIS also evaluates proposed regulatory changes that would apply to existing sanctuary boundaries. NOAA is considering expansion of CBNMS and GFNMS to an area north of the existing sanctuaries that extends from Bodega Bay in Sonoma County, to just south of Alder Creek in Mendocino County, and west beyond the continental shelf.

The draft management plans (DMP) for each sanctuary are published separately. They include information about the sanctuaries' environment and resources, regulations and boundaries, staffing and administration, priority management issues, and actions proposed to address them over the next five to ten years. The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) is the lead agency for this proposed project.

This DEIS has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code (U.S.C.) § 4321 *et seq.*) and its implementing regulations (40 Code of Federal Regulations (CFR) Parts 1500-1508). This DEIS presents information to understand the potential environmental consequences of the proposed action and alternatives.

Section 304(a)(4) of the NMSA requires that "terms of designation may be modified only by the same procedures by which the original designation is made." When CBNMS and GFNMS were under consideration for establishment under the NMSA, EISs were prepared prior to their designations as required by the NMSA. As such, since the proposed action would modify the sanctuaries' terms of designation, the NMSA requires preparation of an EIS regardless of the significance of the impacts of the alteration.

Background

In 2001, NOAA received public comment during joint management plan review scoping meetings requesting that CBNMS and GFNMS be expanded north and west. In response, the revised sanctuary management plans completed in 2008 include strategies to facilitate a public process to ensure that boundaries are inclusive of the area's natural resource and ecological qualities, including the biogeographic representation of the area.

Since 2003, sanctuary advisory councils from both sites have regularly discussed expansion northward of the sanctuaries. Beginning in 2004, then Congresswoman Lynn Woolsey, joined later by Senator Barbara Boxer, repeatedly introduced legislation to expand both of these national marine sanctuaries. Interest in

expanding CBNMS and GFNMS stemmed from a desire to protect the biologically productive underwater habitat and important upwelling center that is the source of nutrient rich waters.

At times during review of the proposed expansion legislation, NOAA expressed support for the expansion, including the boundary option the legislation proposed. In 2008, the joint management plan review for CBNMS and GFNMS included strategies for the managers of these sanctuaries to facilitate a public process within five years to evaluate boundary alternatives that ensured maintenance of the area's natural ecosystem, including its contribution to biological productivity. The aim was to ensure the sanctuaries' boundaries were inclusive of the area's natural resource, ecological qualities, and biogeographic representation of the area. Accordingly, in compliance with Section 304(e) of the National Marine Sanctuaries Act (NMSA; 16 U.S.C. § 1431 *et seq.*) NOAA initiated the public process in December 2012 to evaluate and assess a proposed expansion of the sanctuaries. In doing so, NOAA is considering extending, and as necessary amending, the regulations and management plan for CBNMS and GFNMS to this area. Additional information on the background of the proposed action is available at <http://farallones.noaa.gov/manage/expansion/cbgf.html>.

Project Location

Figure ES-1 shows the regional location of the proposed expansion area, including the existing and proposed sanctuary boundaries and surrounding area. The proposed expansion area covers the offshore coastal area from Bodega Bay in Sonoma County to a point just south of Alder Creek in Mendocino County. It also includes extension of CBNMS farther west offshore of Marin County and north to include Bodega Canyon. The total expansion area is 2771 square miles (sq miles) (2093 square nautical miles [sq nm]). Approximately 757 sq miles (572 sq nm) of offshore ocean waters and the submerged lands under those waters would be added to the existing CBNMS size of 528 sq miles (399 sq nm), for a total size of approximately 1286 sq miles (971 sq nm). The expanded GFNMS area would be north of the existing GFNMS and would add approximately 2014 sq miles (1521 sq nm) to the existing 1279 sq miles (966 sq nm) sanctuary, with a total size of approximately 3297 sq miles (2490 sq nm) (including the additional four sq miles of restored wetlands on the Giacomini property).

Purpose and Need

The purpose of this action, expansion of CBNMS and GFNMS to an area north and west of their current boundaries, is to extend national marine sanctuary protection to an area that has significant marine resources and habitats and is the source of nutrient-rich upwelled waters for the existing marine sanctuaries. This expansion would encompass a globally significant coastal upwelling center originating off Point Arena and flowing into GFNMS and CBNMS via wind driven currents. The proposed action would also carry over existing regulations into the expansion area, amend current regulations for GFNMS and CBNMS, and add new regulations. These regulatory changes would provide for comprehensive management and protection of the resources of the area encompassed by the current sanctuaries and the proposed expansion area.

Expansion of CBNMS and GFNMS to this area would protect one of the most consistent and intense coastal upwelling centers in all of North America and the spectacular marine ecosystem along the southern Mendocino and Sonoma Coast. Because of effects related to coastal topography and ocean circulation,

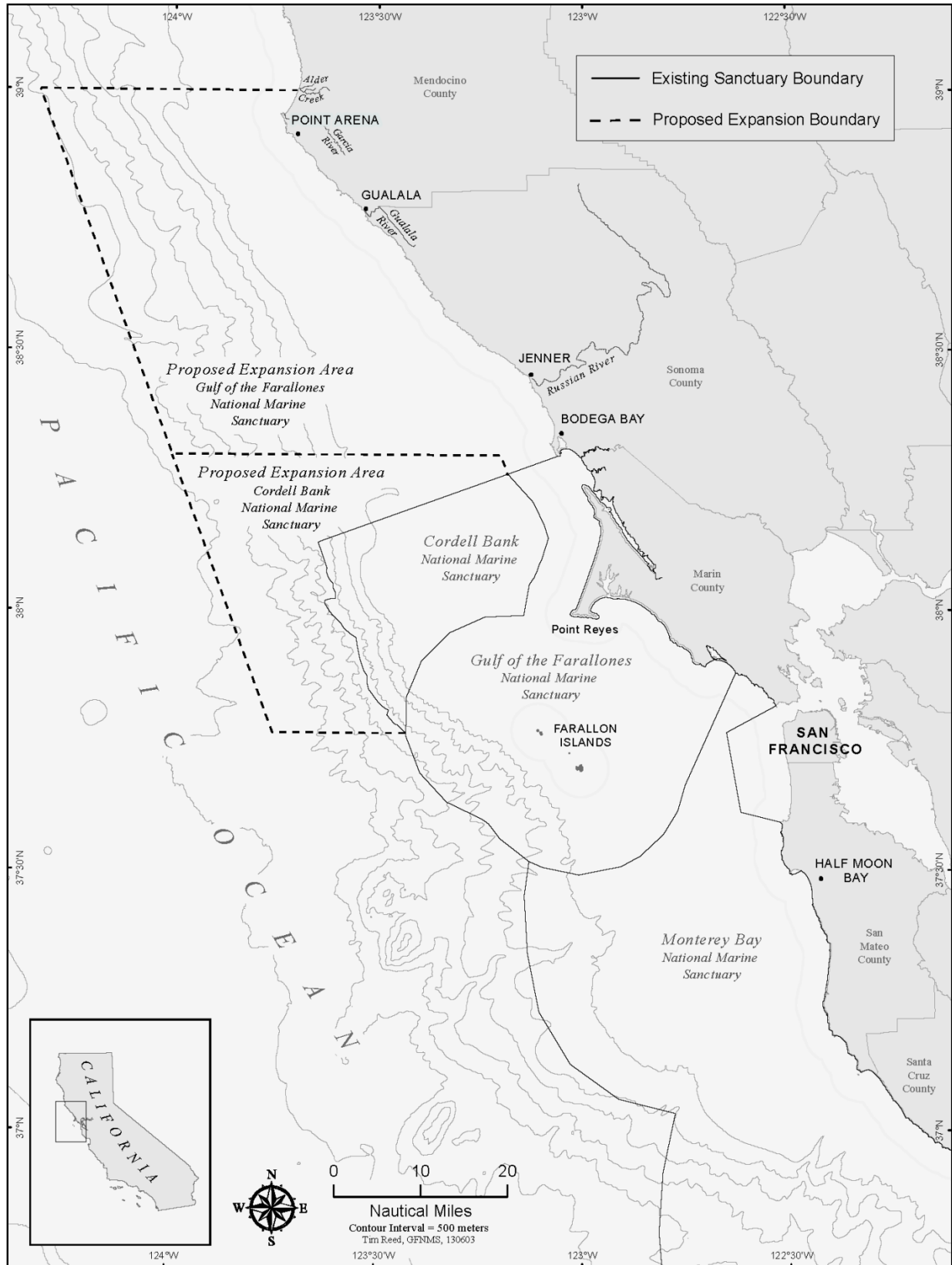


Figure ES-1. Regional Location of Proposed Expansion Area

upwelling at Point Arena is concentrated into a strong center or ‘cell’ distinctly different from upwelling along the California Current (see Figure 4.3-1 in Section 4.3 [Biological Resources]). The Point Arena upwelling center is largely separate from upwelling to the north and strongly linked with areas to the south; analysis of ocean currents, water properties, and chlorophyll show a strong association between water upwelled at Point Arena and coastal water masses off southern Mendocino, Sonoma and Marin Counties (Halle and Largier 2011). Upwelling currents at Point Arena carry nutrients to the surface where the prevailing wind driven surface currents transport the nutrient filled waters south along the Mendocino and Sonoma coast to the waters over Cordell Bank and around the Farallon Islands. These nutrients are the foundation of the food rich environment in the study area and promote the growth of organisms at all levels of the marine food web. The nutrients flowing from this upwelling center form the basis of support for a range of species, from plankton to predators. Cordell Bank is densely covered with invertebrates, and has hundreds of species of fish, seabirds and marine mammals in the ocean waters above and around it. Bodega Canyon is a prominent submarine feature in close proximity to Cordell Bank. This seafloor feature cuts across the continental shelf and slope north of Cordell Bank. Submarine canyons provide areas of high bathymetric complexity, support deep water communities, and effect local and regional circulation patterns. Bodega Canyon provides habitat for adult stages of groundfish including rockfish and flatfish that rear in nearshore waters and move offshore in their adult stages. In addition, offshore canyons and other bathymetric features are important foraging areas for seabirds and marine mammals. Offshore waters of the study area support large populations of krill, which are keystone species and form the basis of a productive marine food web.

The action would connect key geographic components of the Point Arena upwelling system, extending sanctuary boundaries from the source waters of the nutrient-based food web to existing areas of high biological productivity around the Farallon Islands and Cordell Bank. In addition, the thriving marine ecosystems along and offshore of southern Mendocino and Sonoma Counties would receive sanctuary protection. Expansion of the sanctuaries would also protect nationally significant seascapes and shipwrecks, and recreational and commercial uses, including fisheries, in the area.

The proposed expansion area’s nutrient-rich waters are integral parts of the overall marine ecosystem for these sanctuaries but are currently outside the sanctuaries’ boundaries. The upwelled water that emanates from Point Arena is the regional ecosystem driver for productivity in coastal waters of north central California. The source waters of CBNMS and GFNMS are not afforded the needed level of protections, management actions and programs that national marine sanctuaries provide. Including this area within CBNMS and GFNMS is critical to help conserve and protect resources by preventing or reducing human-caused impacts such as marine pollution and seabed disturbance, which have the potential to impact the proposed expansion area as well as downstream areas. The biological communities of these national marine sanctuaries are susceptible to damage from these and other select human activities. Additional protection is needed for the food-rich water flowing south from the Point Arena area that supports a marine food web made up of many species of algae, invertebrates, fish, seabirds, and marine mammals. Some species are transitory, travelling hundreds or thousands of miles to the region, such as endangered blue whales, albatross, shearwaters, king salmon, white and salmon sharks, while others live year round in the sanctuaries, such as Dungeness crab, sponges, other benthic invertebrates and many species of rockfish. Of note, the largest assemblage of breeding seabirds in the contiguous United States is at the

Farallon Islands, and each year their breeding success depends on a healthy and productive marine ecosystem so nesting adults and fledgling young can feed and flourish.

Existing laws and policies for the Point Arena upwelling area and south do not provide comprehensive and coordinated conservation and management to protect resources, and application of the NMSA through the sanctuaries' expansion would provide this needed safeguard while facilitating uses compatible with resource protection. In addition, community members and members of Congress have expressed their desire for and the need to ensure better protection of the sanctuaries' resources. Management of these nationally significant places under the National Marine Sanctuaries Act would provide protection through regulations pertaining to: discharge, altering the seabed, taking and possessing certain species, disturbing historical resources, introducing introduced species, attracting white sharks, approaching white sharks in certain designated zones, deserting a vessel, prohibiting oil, gas and minerals exploration, operating motorized personal watercrafts, flying aircrafts below 1,000 feet in certain designated zones, sailing cargo vessels in certain designated zones, prohibiting interference with an investigation, and providing the ability for GFNMS to authorize permits for certain currently prohibited activities, such as discharge and alteration of the submerged land in the sanctuary.

Scope of EIS

This EIS evaluates the environmental impacts associated with expansion of both CBNMS and GFNMS. Alternatives to the proposed action consist of slight variations in the proposed regulations and several localized boundary options. This EIS focuses on the regulatory changes that could affect the environment. Since the proposed action includes several modifications to existing sanctuary regulations, there are implications for the existing sanctuaries as well that are evaluated in this EIS.

Because there are specific proposed boundary and regulatory changes, both sanctuaries' terms of designation must be amended to establish authority for the new or modified regulations and boundaries (see Appendix D). These revisions, which are narrow in scope and correspond directly to the proposed boundary and regulatory changes, are included as part of the proposed action evaluated in this EIS.

Decisions to be Made

Decisions related to the proposed action include the following:

- Expansion of CBNMS and GFNMS boundaries;
- Proposed changes to the terms of designation for CBNMS and GFNMS;
- Proposed changes to regulations for CBNMS and GFNMS; and
- Revised management plans for CBNMS and GFNMS.

Public and Agency Involvement

According to Council on Environmental Quality (CEQ) regulations, federal agencies are required to "make diligent efforts to involve the public in preparing and implementing their NEPA procedures" (40 CFR § 1506.6[a]).

Scoping

On December 21, 2012, NOAA published a notice of intent (NOI) in the Federal Register, which notified the public of the proposed action, announced the three public scoping meetings, and solicited public comments. ONMS held public scoping meetings in Bodega Bay on January 24, 2013, Point Arena on February 12, 2013 and Gualala on February 13, 2013. Several hundred people participated in these meetings and provided input on specific issues to be analyzed or addressed as part of the environmental analysis for the proposed expansion of the sanctuary boundaries.

In addition to public scoping meetings, ONMS accepted written comments from December 21, 2012 to March 1, 2013. Comments were provided in the form of e-mails, letters, faxes, and electronic submissions on <http://www.regulations.gov>. During the comment period, the agency received over 300 comments. A website http://farallones.noaa.gov/manage/expansion_cbgf.html serves as a central location of project information while the EIS is being developed. The website provides a link <http://www.regulations.gov/#!docketDetail;D=NOAA-NOS-2012-0228> to access all of the scoping comments received on the project.

NOAA is working closely with a variety of pertinent resource agencies on the development of the EIS, the management plans, and the proposed regulations. NOAA has sought the input of numerous federal, state, and local officials and agencies in preparing this DEIS (see Appendix F).

Public Review of the Draft EIS

A public review period of at least 60 days follows the Notice of Availability for publication of the DEIS in the Federal Register. Availability of the DEIS was announced in the Federal Register, on various e-mail lists, on the project website, and in local newspapers. In addition, copies of the DEIS are available for review in numerous locations, such as libraries, throughout the study area (locations will be published with notice of availability in local newspapers). Public hearings will be held no sooner than 30 days after the notice is published in the Federal Register.

During the public comment period, oral and written comments are anticipated from federal, state, and local agencies and officials, from organizations, and from interested individuals. After the public comment period is over, the comments will be reviewed. A summary of these comments and the corresponding responses from the agency will be included in the Final EIS. If necessary, changes will be made to the EIS as well as the proposed rule and draft management plans as a result of the public comments.

If NOAA moves forward with a final action, it will issue a Final EIS, after which a 30-day mandatory waiting period will occur, and then NOAA may issue its record of decision (ROD). In addition, a final rule that promulgates changes to the regulations and terms of designation of the sanctuaries would be published in the Federal Register.

Summary of Proposed Action and Alternatives

There are a total of five alternatives, several of which are sub-alternatives:

- The proposed action includes modifications to the existing sanctuary regulations and expansion of the boundaries of both the CBNMS and GFNMS;

- The existing regulations alternative represents a second regulatory alternative, with the same proposed sanctuary expansion boundary as the proposed action;
- The no action alternative represents the condition in which the sanctuaries are not expanded and the sanctuary regulations are not modified;
- The Arena Cove boundary alternative is a sub-alternative that includes all of Arena Cove in the sanctuary expansion area and could be implemented with either the proposed action regulations or existing regulations alternative; and
- The Motorized Personal Watercraft (MPWC) zone alternative is a sub-alternative to the proposed action, involving slight alterations of proposed MPWC operation zone boundaries.

The alternatives are summarized in the following subsections.

Proposed Action

The proposed action represents the preferred alternative and involves expanding both GFNMS and CBNMS boundaries, as well as applying a set of sanctuary regulations that have been tailored for more targeted protection of the area's resources. Some of the GFNMS and CBNMS regulations would be extended to the expansion area without changes, some existing regulations would be altered and applied to both the existing and expanded sanctuaries, and some new regulations would be added in order to best suit the resource protection needs of the expanded sanctuaries. Each sanctuary's terms of designation would be modified to reflect the expanded boundaries, and each sanctuary's management plan would be updated.

Boundary Area

The proposed action involves expanding the boundaries of CBNMS and GFNMS to include waters and submerged lands offshore Sonoma and Mendocino Counties. The overall expansion area would be to the north and west, encompassing waters adjacent to the Sonoma coast and a portion of the Mendocino coast up to a point just south of Alder Creek. The western boundary would be generally aligned with the 1500 fathom depth contour. The northern area would become part of GFNMS. The proposed CBNMS expansion area includes area to the north and west of the existing sanctuary, offshore Marin County. The proposed boundaries are shown in Figure ES-1.

Proposed Regulations

Since the proposed action includes expansion of both CBNMS and GFNMS, the expansion area would be subject to NOAA regulations (CFR Title 15, Part 922) that apply to national marine sanctuaries (Subparts A, D and E, unless noted otherwise) and to the individual regulations of these two sanctuaries (Subparts K and H, respectively). There are several slight differences between the regulations of the two sanctuaries. The regulations for both sanctuaries include definitions, prohibited activities and other regulated uses and permit processes and issuance criteria. In order to design the sanctuary regulations for the existing and anticipated uses in both the current sanctuaries and the proposed expansion area, the existing regulations of CBNMS and GFNMS would be slightly modified. These revisions would apply to both the existing sanctuaries and proposed expansion area. The proposed regulations for the two sanctuaries are described

below and any substantive differences between existing and proposed regulations are noted. The full text of the proposed regulations is included in the proposed rule, published by NOAA in the Federal Register.

CBNMS

The following prohibitions and permit requirements as modified from current regulations would be applied to both the existing sanctuary and the expansion area. Regulations that are new or substantially modified from existing regulations are noted with an asterisk (*).

Prohibited Activities

The following activities would be prohibited within the sanctuary (including both existing sanctuary and proposed sanctuary expansion area¹:

- Oil, gas or mineral exploration, development or production.
- Discharging or depositing into the sanctuary, other than from a cruise ship, any material except:
 - Fish, fish parts, chumming materials or bait, used in lawful fishing;
 - For a vessel less than 300 gross registered tons (GRT):
 - clean effluent generated incidental to vessel use and generated by an operable Type I or II marine sanitation device (MSD; U.S. Coast Guard classification); and
 - clean graywater*²;
 - For a vessel 300 GRT or greater without sufficient tank capacity to hold sewage and/or graywater while within the sanctuary:
 - clean effluent generated incidental to vessel use and generated by an operable Type I or II marine sanitation device (U.S. Coast Guard classification); and
 - clean graywater*;
 - Clean vessel deck wash down, clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, or anchor wash; or
 - Vessel engine or generator exhaust.
- Discharging from a cruise ship except clean vessel engine cooling water, clean vessel generator cooling water, vessel engine or generator exhaust, clean bilge water, or anchor wash.
- Discharging or depositing, from beyond the boundary of the sanctuary, any material that subsequently enters the sanctuary and injures a sanctuary resource or quality, with the same exceptions as listed above.

¹ The order of prohibitions has been modified from the order in the existing regulations.

² Graywater is defined in section 312 of the Clean Water Act as galley, bath, and shower water. Clean means not containing detectable levels of harmful matter.

- Removing, taking, or injuring benthic invertebrates or algae located on or within the line representing the 50-fathom isobath surrounding Cordell Bank. (This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States)).
- Drilling into, dredging, or otherwise altering the submerged lands within the line representing the 50-fathom isobath surrounding Cordell Bank; or constructing, placing, or abandoning any structure or material on or in the submerged lands. (This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States)).
- Beyond the line representing the 50-fathom isobath surrounding Cordell Bank, drilling into, dredging, or otherwise altering the submerged lands; or constructing, placing, or abandoning any structure or material on the submerged lands except for anchoring any vessel or lawful use of any fishing gear.
- Taking any marine mammal, sea turtle, or bird, except as authorized by existing regulations.
- Possessing within the sanctuary any marine mammal, sea turtle or bird taken, except as authorized by existing regulations or as necessary for law enforcement purposes.
- Possessing, moving, removing, or injuring a sanctuary historical resource.*
- Introducing or otherwise releasing an introduced species, except striped bass (*Morone saxatilis*) released during catch and release fishing activity.
- Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of regulations.*

Exceptions and Authorizations

There are proposed exceptions to the above prohibitions, as well as a new proposed authorization procedure to allow certain activities:

- Exceptions for Emergencies – The above prohibitions do not apply to activities necessary to respond to an emergency threatening life, property or the environment, or as may be permitted by the Sanctuary Superintendent, with authority delegated by the ONMS Director, in accordance with criteria outlined in 15 CFR § 922.48 (National Marine Sanctuary permits – application procedures and issuance criteria) and specifically allowed within the CBNMS permit procedures and criteria 15 CFR § 922.113.
- Department of Defense – All activities carried out by the Department of Defense (DOD) on the effective date of expansion that are necessary for national defense are exempt from the above prohibitions; other such activities will be exempted after consultation between the Department of Commerce and the DOD. DOD activities not necessary for national defense, such as routine exercises and vessel operations, are subject to all prohibitions contained in the regulations in this subpart.
- Authorizations* – A new authorization authority would establish a mechanism for the sanctuary to potentially allow several specific prohibited activities within the existing sanctuary and the proposed

expansion area if they were approved by another authorizing entity and subject to terms and conditions of the sanctuary. This change would have implications for the existing sanctuary as well as the proposed expansion area. Activities potentially allowed by authorization would include discharges, submerged lands alteration beyond the line representing the 50-fathom isobath surrounding Cordell Bank, taking or possessing marine wildlife and possessing or injuring historic resources. Under no circumstance would oil or gas development be allowed.

- **Emergencies** – Where necessary to prevent immediate, serious, and irreversible damage to a sanctuary resource, any activity may be regulated on an emergency basis for up to 120 days.

Permits

The proposed regulations would extend permit procedures and criteria for issuing permits currently established in the sanctuaries to the expansion area. With authority delegated by the ONMS Director, the Sanctuary Superintendent may issue a permit for activities prohibited above, subject to terms and conditions. A permit may be issued for activities that will: further research or monitoring related to sanctuary resources and qualities; further the educational value of the sanctuary; further salvage or recovery operations in or near the sanctuary; or assist in managing the sanctuary. In no event may a permit be issued to allow oil, gas or mineral exploration, development or production.

GFNMS

For the proposed action, GFNMS would include similar new provisions listed above for CBNMS, as well as additional modified prohibitions. These regulations would be applied to the entire sanctuary, both existing and expanded boundaries. New or substantially modified regulations are noted with an asterisk (*).

Prohibited Activities

Several of the proposed prohibitions are the same as CBNMS, including prohibitions of: oil, gas or mineral development, discharges, taking any marine mammal, sea turtle, or bird, possessing any marine mammal, sea turtle, or bird, possessing, moving, removing, or injuring a sanctuary historical resource, and interfering with enforcement action*. In addition, the following activities would be prohibited within GFNMS (15 CFR 922.82, Prohibited or otherwise regulated activities):

- **Constructing any structure other than a navigation aid on or in the submerged lands of the sanctuary; placing or abandoning any structure on or in the submerged lands of the sanctuary; or drilling into, dredging, or otherwise altering the submerged lands of the sanctuary in any way, except:**
 - By anchoring vessels;
 - While conducting lawful fishing activities;
 - Routine maintenance and construction of docks and piers on Tomales Bay; or
 - Mariculture activities conducted pursuant to a valid lease, permit, license or other authorization issued by the State of California.
- **Operating motorized personal watercraft (MPWC), except:**

- For emergency search and rescue missions or law enforcement operations (other than routine training activities) carried out by the National Park Service, U.S. Coast Guard, Fire or Police Departments or other Federal, State or local jurisdictions; or
- For a MPWC equipped with a GPS unit within four designated zones in the expansion area of the sanctuary.*

The four proposed MPWC zones would avoid the proposed Special Wildlife Protection Zones (SWPZs) and include traditional coastal access points. The proposed MPWC zones would be located as follows (see Chapter 3, Description of Proposed Action and Alternatives, for maps of proposed locations):

- Zone 1 (From latitude 39 to Arena Cove) (Area: 6.4 sq nm) – This seasonal zone would be open from October to February. It would be closed from March to September to limit potential negative interactions with MPWC landing on Manchester beach during the time that Snowy Plovers, listed as threatened by the Endangered Species Act, nest on beach.
 - Zone 2 (From Arena Cove to Havens Neck) (Area: 19.8 sq nm) – Prominent visual markers at Arena Cove, Moat, Saunders Landing, Iverson Landing and Haven's Neck would be used to define the eastern boundary. The proposed zone would require MPWC users to stay seaward of all the listed points at all times. Use of waypoints at each of the shoreside locations would help operators with compliance.
 - Zone 3 (Timber Cove) (Area: 2.9 sq nm) – Zone 3 would be accessed through a boat ramp at Timber Cove.
 - Zone 4 (From Bodega Head to Coleman Beach) (Zone Area: 4.5 sq nm; Access Area: 0.3 sq nm) – A 100-yard access route from Bodega Harbor using the harbor entrance and two navigational buoys would allow entrance to the southern boundary of the zone. Seasonal access would also be available through Salmon Creek, at Bean Avenue and the Ranger's Station (see Figure 3.2-15).
- Introducing or otherwise releasing from within or into the sanctuary an introduced species, except: striped bass (*Morone saxatilis*) released during catch and release fishing activity — same as CBNMS; or species cultivated by mariculture activities in Tomales Bay pursuant to a valid lease, permit, license or other authorization issued by the State of California and in effect on the effective date of the final regulation.
 - Disturbing marine mammals or seabirds by flying motorized aircraft at less than 1000 feet over the waters within the seven designated SWPZs except to transport persons or supplies to or from the Farallon Islands or for enforcement purposes. Failure to maintain a minimum altitude of 1000 feet above ground level over such waters is presumed to disturb marine mammals or seabirds.*
 - Operating any cargo vessel engaged within an area extending one nm from a designated SWPZ.*

As part of these two regulations that reference SWPZs, the sanctuary would designate SWPZs instead of continuing to use Areas of Special Biological Significance (ASBS) and other specified locations. There would be a total of five SWPZs in the current sanctuary boundaries, which would be subject to protection from cargo vessel traffic and low flying aircraft. These zones include: Tomales Point, Point

Reyes, Duxbury Reef-Bolinas Lagoon, and two zones at the Farallon Islands (shown in Figures 3.2-4, 3.2-5, 3.2-6 and 3.2-7 in Chapter 3). Two zones would be created in the proposed expansion area near Gualala and Fort Ross (see Figures 3.2-8 and 3.2-9 in Chapter 3). They would be established in areas of high biological diversity and/or abundance of species including federally listed and specially protected species. SWPZs would be established where biological resources are susceptible to disturbance and need protection from certain activities that could harm these sensitive resources.

The existing GFNMS regulations use a combination of specified locations and State ASBS to protect sensitive seabird and pinniped areas from cargo vessel disturbance or discharge, and from low flying aircraft disturbance. ASBS are those areas designated by California's State Water Resources Control Board as requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. ASBS are a subset of State Water Quality Protection Areas established pursuant to California Public Resources Code section 36700 et seq. These areas were designated based on the presence of certain species or biological communities that, because of their value or fragility, deserve special protection by preserving and maintaining natural water quality conditions to the extent practicable.

Within the existing GFNMS boundaries, ASBS coincide with areas of high biological diversity and/or abundance of species, but the ASBS in the expansion area are not in locations that could provide adequate protections to wildlife if used for proposed cargo vessel or low flying aircraft prohibitions. Therefore, SWPZs are proposed to better reflect resource areas needing protection from cargo vessels and low flying aircraft and to provide consistency between the existing and proposed boundary areas.

In the existing sanctuary boundaries, the proposed boundaries of the new SWPZs are very similar to the areas currently protected from cargo vessels and low flying aircraft, which were defined as areas including a two nautical mile buffer or one nautical mile buffer, respectively, around the Farallon Islands, Bolinas Lagoon or any ASBS. A new definition to describe SWPZs, which approximately cover the areas where the low flying aircraft regulation currently apply, would be added to the GFNMS regulations. Cargo vessels would be required to sail at least one nautical mile from any SWPZ. The proposed new cargo vessel prohibition would remain similar in size and location to the areas currently protected from cargo vessels. Therefore, this proposed change in the current boundaries would result in a negligible change for transiting cargo vessels.

- Attracting a white shark in the sanctuary; or approaching within 50 meters of any white shark within one nautical mile of, and inside, the newly designated SWPZs around Southeast and North Farallon Islands. Currently, NOAA prohibits approaching within 50 meters of a white shark within two nautical miles of the Farallon Islands to prevent harassment and reduce disturbance of white sharks. The location and size of the zones would remain effectively similar to the current prohibition at both the Southeast and North Farallon Islands, however, the area around Middle Farallon Island would be removed resulting in a total area that is smaller than the existing zone. The previous zone was circular and surrounded all the Farallon Islands. The two new zones would be changed to a polygon and match the cargo vessel prohibition zones by creating a one nautical mile buffer around proposed SWPZs 6 and 7. Deserting a vessel aground, at anchor, or adrift in the sanctuary.
- Leaving harmful matter aboard a grounded or deserted vessel in the sanctuary.

- Anchoring a vessel in a designated seagrass protection zone in Tomales Bay, except as necessary for mariculture operations conducted pursuant to a valid lease, permit or license.

Exceptions and Authorizations

There are proposed exceptions to the above prohibitions, as well as a proposed authorization procedure to allow certain activities:

- Exceptions for Emergencies – same as CBNMS.
- Department of Defense – The exemption for DOD activities would be similar to the exemption in CBNMS. All activities currently carried out by DOD are considered essential for national defense and not subject to the prohibitions listed above. Any additional activities would be exempted only after consultation with the Sanctuary Superintendent and the Department of Defense.
- Authorizations* – As with CBNMS, this new authorization authority would potentially allow some specific otherwise prohibited activities listed above if they are authorized by a lease, permit, license, approval, or other authorization issued by another agency. As with CBNMS, this change would have implications for the existing sanctuary as well as the proposed expansion area. Activities potentially allowed by authorization would include discharges, construction on submerged lands, operating MPWC, taking or possessing marine wildlife and possessing or injuring historic resources. Introduction of a non-invasive introduced species from shellfish mariculture in State waters may also be allowed in GFNMS under this authorization process. Under no circumstance would oil, gas or minerals development be allowed.

Permits

The proposed GFNMS regulations would provide a permit process for otherwise prohibited activities and criteria for issuing permits, similar to the proposed CBNMS permit provisions, including findings listed above for CBNMS. The proposed regulations would extend permit procedures and criteria for issuing permits currently established in the sanctuary to the expansion area.

No Action Alternative

Evaluation of a No Action alternative is required under NEPA. The No Action alternative is equivalent to the status quo, with regard to sanctuary boundaries and regulations. No boundary adjustments would be made to include additional north central coast waters and no changes would be made to existing regulations or the terms of designation for either sanctuary. All management practices currently occurring in the north coast offshore area would continue. The No Action alternative would involve continuing to implement the current management plans and regulations for the two sanctuaries. Future development and activities in the proposed expansion area would be subject to existing federal and state regulations. No added protection of biological resources, water quality or cultural resources would be provided and the various educational and monitoring programs outlined in the sanctuary management plans would not be implemented in the proposed expansion area.

Existing Regulations Alternative

This alternative differs from the proposed action only in the application of regulations. The boundaries of each sanctuary would be the same as described for the proposed action. All relevant existing regulations for both GFNMS and CBNMS would be applied to their expanded boundaries. There would be no changes in regulations from those currently in effect. The differences from the proposed action are summarized as follows for each sanctuary.

CBNMS

- There would be no authorization process to potentially allow certain otherwise prohibited activities that are approved pursuant to a valid Federal, state or local lease, permit, license, approval or other authorization mechanism. The sanctuary could issue permits under its general permit authority, which would be limited to activities that: further research or monitoring related to sanctuary resources and qualities; further the educational value of the sanctuary; further salvage or recovery operations; or to assist management of the sanctuary.
- There would be no exemption for clean graywater discharges.
- Regulations would not prohibit possessing, moving, removing, or injuring historical resources.
- The prohibition against interfering with an enforcement action, as described for the proposed action, would not be included in this alternative.
- Permit procedures would not be modified to clarify that the regulations prohibit in all cases the issuance of national marine sanctuary permits for oil, gas or mineral exploration, development, or production. However, oil and gas facilities would be clearly listed as prohibited activities, as in the current regulations.

GFNMS

- Similar to CBNMS, the following changes outlined in the proposed action would not be implemented:
 - There would be no authorization authority to potentially allow certain otherwise prohibited activities except that oil and gas pipelines and non-invasive introduced species could be authorized in certain conditions. As with CBNMS, existing permitted uses could be certified under the national marine sanctuaries program regulations and the sanctuary could issue permits under its general permit authority which are the same as CBNMS.
 - There would be no exemption for clean graywater discharges.
 - The prohibition against interfering with an enforcement action would not be included in this alternative.
 - Permit procedures would not be modified to clarify that the regulations prohibit in all cases the issuance of general permits for oil, gas or mineral exploration, development, or production. However, oil and gas facilities would be clearly listed as prohibited activities, as in the current regulations.
- The existing exemption for oil and gas pipelines in GFNMS would remain, as described in the existing regulations, which would allow pipelines under specific conditions.

- MPWC operation would be prohibited in the expansion area, as it currently is prohibited within the existing GFNMS, without any zones where MPWC operation would be allowed, except when necessary for rescue/safety activities conducted by appropriate public safety agencies, as provided in the existing regulations.
- Cargo vessel prohibition areas would be designated within an area extending 2 nm from the existing ASBS in the expansion area: Saunders Reef, Del Mar Landing, Gerstle Cove and Bodega rather than establishing Special Wildlife Protection Zones, as described for the proposed action. Cargo vessel prohibition areas in the existing sanctuary would continue as they currently exist.
- Low overflight prohibitions would be designated within an area extending one nm at the four ASBS in the expansion area: Saunders Reef, Del Mar Landing, Gerstle Cove and Bodega. Low overflight prohibitions in the existing sanctuary would continue as they currently exist; no changes to their configuration within the existing sanctuary boundaries would occur.

Arena Cove Alternative

This alternative provides an option for including all of Arena Cove within the GFNMS boundary. This differs from the proposed action in that the proposed action excludes the existing pier and waters east (shoreward) of the pier. The boundary would extend to the Arena Cove mean high water line (MHWL) on the shore and would include docks, a pier and all moorings in Arena Cove. This boundary option could be implemented with either the proposed action targeted regulations or with the existing sanctuary regulations alternative.

MPWC Zones Alternative

This alternative provides different boundaries for two of the proposed MPWC zones in the GFNMS expansion area, as described below. There are two alternatives for MPWC Zone 2 and one alternative for Zone 4. The regulations and management plan would be the same as described for the proposed action.

- Zone 2A (From Arena Cove to Havens Neck) (Area 19.8 sq nm) – This alternative zone would create an offshore buffer of 1000 feet to keep MPWC away from the nearshore environment. It would allow for access closer to coves between Moat and Saunders Landing, and between Iversen Landing and Haven's Neck, and would be 0.2 sq nm larger than Zone 2 in the proposed action.
- Zone 2B (From Arena Cove to Havens Neck) (Area 21.5 sq nm) – The boundary of this alternative zone would go to the MHWL and would be 1.9 sq nm larger than Zone 2 in the proposed action. This option would allow MPWC users to land their craft at the two small beaches in this zone, in areas where there is not known breeding seabird colonies or pinniped pupping sites.
- Zone 4A (From Bodega Head to Duncan's Point) (Zone Area 4.3 sq nm; Access Area 0.3 sq nm) – This alternative zone would include, as its only entrance point, a 100-yard access route from Bodega Harbor to the zone using the harbor entrance and two navigational buoys. To further minimize the potential for nearshore impacts on wildlife, it would not allow access from Salmon Creek, Bean Avenue or the Ranger Station at Sonoma Coast State Beach. It would allow access farther north to Duncan's Point, a prominent landmark.



Summary of Impacts

Table ES-1 provides a summary of the impacts identified for the proposed action, the no action alternative, existing regulations alternative, Arena Cove boundary sub-alternative and MPWC zone alternative. None of the alternatives would result in a significant adverse impact on any of the resources or uses in the existing CBNMS or GFNMS or proposed expansion areas of the two sanctuaries. The two regulatory alternatives — the proposed action and existing regulations alternative — would result in similar beneficial impacts on natural resources and similar adverse impacts on other uses in the proposed expansion area.

Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Physical Resources					
Air Quality and Climate	+ Minor benefits from discharge prohibitions	O Status quo	+ Same as proposed action	+ Minor increase in benefit over proposed action due to larger area protected by sanctuary regulations	+ Same as proposed action
Oceanography and Geology	+ Minor benefits from seabed disturbance prohibition, however authorization process could allow some construction or other alteration of the seabed.	O Status quo	+ Slightly higher benefits than proposed action due to no authorization process which means that there would be less potential for activities that disturb the seabed	+ Negligible increase in benefit over proposed action due to larger area protected by sanctuary regulations	NA
Water Quality	+ Benefits from discharge, enter and injure, vessel abandonment prohibitions; minor adverse impact on existing sanctuaries from proposed exemption for graywater.	O Status quo, but lacking the protection offered by the proposed action	+ Slightly higher benefits than proposed action due to no graywater exemption and no authorization process to allow discharges	+ Slightly higher benefits than proposed action due to larger area protected by sanctuary regulations	+ Same as proposed action

Key to symbols:

- O** = No Impact
~ = Less Than Significant Adverse Impact
- = Significant Adverse Impact (Note: no alternative would result in that level of impact)
+ = Beneficial Impact
 NA = Not Applicable

Table ES-1. Summary of Potential Resource Impacts

Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Biological Resources	<p>+</p> <p>Benefits from: prohibitions of discharges, seabed disturbance, vessel abandonment, wildlife take and disturbance; establishment of SWPZ and MPWC zones; cargo vessel restrictions; overflight restrictions; oil and gas development prohibition. Slight adverse impact in existing sanctuaries from new graywater exemption and authorization process that may allow activities such as discharges and seabed disturbance.</p>	<p>O</p> <p>Status quo, but lacking the protection offered by the proposed action</p>	<p>+</p> <p>Slightly higher benefits than proposed action due to no exception for clean graywater discharge, no potential for authorization of prohibited activities such as discharges and seabed disturbance</p>	<p>+</p> <p>Slightly higher benefits than proposed action due to larger area protected by sanctuary regulations</p>	<p>+</p> <p>Similar to proposed action. Alt. Zone 4A is smaller than the proposed action zone and restricts shoreline access points, which would have a slightly higher level of beneficial impact on biological resources.</p>

Key to symbols:

O = No Impact

~ = Less Than Significant Adverse Impact

- = Significant Adverse Impact (Note: no alternative would result in that level of impact)

+ = Beneficial Impact

NA = Not Applicable

Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Commercial Fishing and Aquaculture	<p>+ ~</p> <p>Beneficial effects on fisheries due to discharge, introduced species and oil and gas prohibitions. Minor adverse effects on fishing operations due to discharge and introduced species prohibitions</p>	<p>O</p> <p>Status quo</p>	<p>+ ~</p> <p>Slightly higher benefits and adverse impact than proposed action</p>	<p>+ ~</p> <p>Same as proposed action</p>	NA
Cultural and Maritime Heritage Resources	<p>+</p> <p>Increased protection from prohibition on taking or harming cultural resources; benefit from seabed disturbance prohibition</p>	<p>O</p> <p>Status quo, but lacking the protection offered by the proposed action</p>	<p>+</p> <p>Similar to proposed action, but no specific prohibition on harming cultural resources in CBNMS, so slightly less protection; slightly more potential protection with no authorization process to allow activities that might disturb cultural resources.</p>	<p>+</p> <p>Slightly higher benefit than proposed action due to implementation of protection in the cove</p>	NA
Socioeconomic Resources, Human Uses and Environmental Justice					
Socioeconomics*	O	O	O	O	NA

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NA = Not Applicable

Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Environmental Justice	<p>O</p> <p>Low-income and minority populations would not be disproportionately affected</p>	O	O	O	O
Tourism	<p>+</p> <p>Benefits from potentially improved resource and increased awareness due to sanctuary status</p>	O	<p>+</p> <p>Same as proposed action</p>	<p>+</p> <p>Same as proposed action</p>	NA
Land Use and Development	<p>~</p> <p>Some activities prohibited such as pier construction, placement of structures on seabed, unless authorized or permitted by the sanctuary</p>	O	<p>~</p> <p>Higher level of adverse impact than proposed action; no authorization process to approve new discharges or construction on seabed.</p>	<p>~</p> <p>Slightly higher level of adverse impact than proposed action; any future uses would be subject to sanctuary regulations and permits</p>	NA
Recreation	<p>~</p> <p>Due to limitations of MPWC and discharge prohibitions</p>	O	<p>~</p> <p>Higher level of adverse impact than proposed action due to stricter discharge regulations and MPWC prohibition</p>	<p>~</p> <p>Same as proposed action</p>	<p>~</p> <p>Same as proposed action</p>

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NA = Not Applicable

Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Research and Education	<p>+</p> <p>Benefits from sanctuary programs, possible increased research opportunities and higher quality resources due to sanctuary prohibitions</p>	<p>O</p>	<p>+</p> <p>Same as proposed action</p>	<p>+</p> <p>Same as proposed action</p>	<p>NA</p>
Offshore Energy Development	<p>~</p> <p>Prohibition of oil and gas development is not significant due to no existing or planned facilities; minor adverse effects on alternative energy due to compliance with sanctuary regulations</p>	<p>O</p>	<p>~</p> <p>Same as proposed action regarding oil and gas development; greater adverse impacts on alternative energy due to absence of authorization process to allow facilities that alter the seabed or have discharges.</p>	<p>~</p> <p>Same as proposed action</p>	<p>NA</p>

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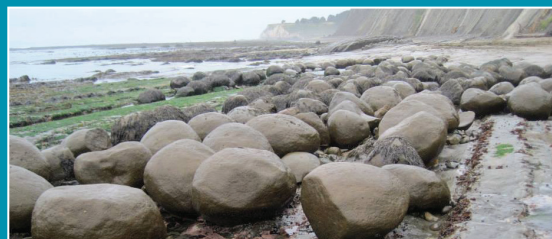
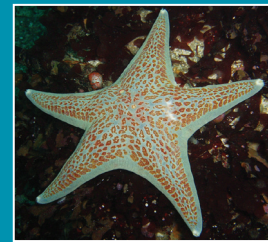
Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Marine Transportation	~ Due to discharge and introduced species prohibitions	O	~ Slightly higher level of adverse impact than proposed action due to no exception for clean graywater discharges.	~ Similar to proposed action. Very minor increase in adverse impact due to application of discharge and other regulations to the cove.	NA
Homeland Security and Military Uses	~ Due to discharge and introduced species prohibitions	O	~ Slightly higher level of adverse impact than proposed action due to no exception for clean graywater discharges.	O	NA

*The impacts across all regulations for all regulatory alternatives in Socioeconomics are not expected to rise to the level that any negative impacts would occur. It is most likely there would be small positive impacts.

Key to symbols:

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- NA = Not Applicable

CORDELL BANK AND GULF OF THE FARALLONES NATIONAL MARINE SANCTUARIES EXPANSION



Photos (top row, left to right): Steve Lomhart, Jenny Stock, Steve Lomhart; (middle and bottom rows): Jenny Stock

Draft Environmental Impact Statement

April 2014

DRAFT

Environmental Impact Statement

Cordell Bank and Gulf of the Farallones National Marine Sanctuaries Expansion

Prepared by:

**Office of National Marine Sanctuaries
National Oceanic and Atmospheric Administration
Cordell Bank & Gulf of the Farallones
National Marine Sanctuaries**



April 2014



Dear Reviewer

[PLACEHOLDER FOR THIS – WILL INCLUDE CONTACT INFORMATION]



About This Document

This draft environmental impact statement (DEIS) provides detailed information and analysis of a range of reasonable alternatives for a proposed boundary expansion to include the nutrient-rich waters from the Point Arena ocean upwelling and the waters south of it in these sanctuaries. This document includes analysis of the potential environmental, cultural and socioeconomic impacts of the proposed boundary expansion as well as several regulatory changes that would affect the existing Cordell Bank and Gulf of the Farallones national marine sanctuaries.

The National Oceanic and Atmospheric Administration (NOAA) prepared this DEIS in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 USC §4321 *et seq.*) as implemented by the Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and NOAA Administrative Order (NAO) 216-6, which describes NOAA policies, requirements, and procedures for implementing NEPA.

NOAA is the lead agency for this action. NOAA's Office of National Marine Sanctuaries (ONMS) is the implementing office for this action.

This document relies on expertise and information, comments and recommendations from the sanctuary advisory councils, National Marine Fisheries Service, NOAA staff and scoping participants.

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CONTENTS

Executive Summary

Background, Purpose and Need	ES-1
Public and Agency Involvement.....	ES-5
Summary of Proposed Action and Alternatives.....	ES-6
Summary of Impacts	ES-16

Chapter 1 – Background

1.1 Statutory Authorities – National Marine Sanctuaries Act.....	1-1
1.2 The Office of National Marine Sanctuaries.....	1-2
1.3 National Marine Sanctuaries as Marine Protected Areas	1-3
1.4 Comprehensive Management of the National Marine Sanctuary System.....	1-3
1.5 CBNMS and GFNMS Management.....	1-4
1.6 Project Location and Background	1-5
1.7 Public Involvement	1-7
1.8 Organization of EIS	1-8

Chapter 2 – Purpose of and Need for Action

2.1 Purpose of Action.....	2-1
2.2 Need for Action.....	2-3
2.3 Scope of EIS	2-4
2.4 Decisions to be Made and Agency Coordination.....	2-5

Chapter 3 – Description of Proposed Action and Alternatives

3.1 Development of Alternatives.....	3-1
3.2 Proposed Action.....	3-2
3.3 No Action Alternative.....	3-34
3.4 Alternative – Application of Existing Sanctuary Regulations.....	3-34
3.5 Arena Cove Boundary Alternative	3-39
3.6 Alternative MPWC Zones	3-40
3.7 Other Alternatives Considered and Eliminated.....	3-42

Chapter 4 – Affected Environment and Environmental Consequences

4.1 Introduction	4.1-1
4.1.1 Chapter Overview/Format	4.1-1
4.1.2 Scope of Impact Analysis and Study Area.....	4.1-2
4.1.3 Determining Significance of Impacts	4.1-3
4.1.4 Resources/Issues Not Analyzed	4.1-3
4.2 Physical Resources	4.2-1
4.2.1 Regional Overview of Affected Environment.....	4.2-1
4.2.2 Regulatory Overview.....	4.2-16
4.2.3 Impact Assessment Methodology.....	4.2-21
4.2.4 Environmental Consequences.....	4.2-23

4.3	Biological Resources	4.3-1
4.3.1	Regional Overview of Affected Environment.....	4.3-1
4.3.2	Regulatory Overview.....	4.3-14
4.3.3	Impact Assessment Methodology.....	4.3-18
4.3.4	Environmental Consequences.....	4.3-20
4.4	Commercial Fishing and Aquaculture	4.4-1
4.4.1	Regional Overview of Affected Environment.....	4.4-1
4.4.2	Regulatory Overview.....	4.4-8
4.4.3	Impact Assessment Methodology.....	4.4-10
4.4.4	Environmental Consequences.....	4.4-11
4.5	Cultural and Maritime Heritage Resources.....	4.5-1
4.5.1	Regional Overview of Affected Environment.....	4.5-1
4.5.2	Regulatory Overview.....	4.5-10
4.5.3	Impact Assessment Methodology.....	4.5-14
4.5.4	Environmental Consequences.....	4.5-15
4.6	Socioeconomic Resources, Human Uses and Environmental Justice	4.6-1
4.6.1	Regional Overview of Affected Environment.....	4.6-1
4.6.2	Regulatory Overview.....	4.6-32
4.6.3	Impact Assessment Methodology.....	4.6-34
4.6.4	Environmental Consequences.....	4.6-34
4.7	Offshore Energy.....	4.7-1
4.7.1	Regional Overview of Affected Environment.....	4.7-1
4.7.2	Regulatory Overview.....	4.7-3
4.7.3	Impact Assessment Methodology.....	4.7-6
4.7.4	Environmental Consequences.....	4.7-6
4.8	Marine Transportation	4.8-1
4.8.1	Regional Overview of Affected Environment.....	4.8-1
4.8.2	Regulatory Overview.....	4.8-4
4.8.3	Impact Assessment Methodology.....	4.8-5
4.8.4	Environmental Consequences.....	4.8-5
4.9	Homeland Security and Military Uses.....	4.9-1
4.9.1	Regional Overview of Affected Environment.....	4.9-1
4.9.2	Regulatory Overview.....	4.9-4
4.9.3	Impact Assessment Methodology.....	4.9-6
4.9.4	Environmental Consequences.....	4.9-7
4.10	Cumulative Impacts	4.10-1
4.10.1	Introduction	4.10-1
4.10.2	Cumulative Impact Assessment Methods	4.10-1
4.10.3	Past, Present and Reasonably Foreseeable Future Projects	4.10-1
4.10.4	Cumulative Impacts	4.10-6
4.11	Comparison of Alternatives.....	4.11-1
4.11.1	Introduction	4.11-1
4.11.2	Summary Comparison of Impacts	4.11-1
	Chapter 5 – References	5-1

Tables

Table 4.4-1	Listing of Individual Ports by Port Group.....	4.4-1
Table 4.4-2	Number of Commercial Fishing Vessels Reporting Catches at Major Port Groups.....	4.4-2
Table 4.4-3	Selected Top Ex-vessel Revenue Producing Species/Species Groups Reported to the Ports of the Study Area, Pounds and Ex-vessel Value, 2000, 2005, 2011.....	4.4-6
Table 4.5-1	Known Shipwrecks and Lost Aircraft within Study Area.....	4.5-5
Table 4.8-1	Summary of Vessel Transits in and out of San Francisco Bay.....	4.8-1
Table 4.10-1	Projects with Potential to Contribute to Cumulative Impacts.....	4.10-2
Table 4.11-1	Comparison of Alternatives.....	4.11-4
Table 4.6-1	Selected Socioeconomic Measures for Description of the Study Area.....	4.6-3
Table 4.6-2	Population Growth and Projected Growth.....	4.6-4
Table 4.6-3	Unemployment Rates and Per Capita Personal Income.....	4.6-5
Table 4.6-4	Race/Ethnicity by County in CB-GF Expansion Area, 2011.....	4.6-8
Table 4.6-5	Labor Force and Labor Force Growth.....	4.6-10
Table 4.6-6	Personal Income by Place of Residence and Place of Work, 2010.....	4.6-12
Table 4.6-7	Personal Income by Place of Residence and Place of Work.....	4.6-13
Table 4.6-8	Total Employment, 1990-2000 and 2010.....	4.6-14
Table 4.6-9	Proprietors' Income and Employment.....	4.6-15
Table 4.6-10	Spatial Coverage of Recreational Ocean Uses in Proposed Expansion Area Waters.....	4.6-20
Table 4.6-11	Attendance at California State Parks Adjacent to the Shore in the Study Region (fiscal year 2010/2011).....	4.6-21
Table 4.6-12	Attendance at Regional Parks and Sea Ranch Trails Adjacent to the Shore in the Study Region (fiscal year 2010/2011).....	4.6-21
Table 4.6-13	Estimated Number of Days Fished and Participants in Central California by Mode and Resident Status (2000).....	4.6-22
Table 4.6-14	Abalone Report Card Landing Sites and Associated Average Annual Landings.....	4.6-23

Figures

Figure ES-1	Regional Location of Proposed Expansion Area.....	ES-3
Figure 1.2-1	The National Marine Sanctuaries System.....	1-3
Figure 1.6-1	Regional Location of Proposed Expansion Area.....	1-6
Figure 3.2-1	Northern GFNMS Boundary Detail – Proposed Action.....	3-5
Figure 3.2-2	Arena Cove Harbor Detail – Proposed Action.....	3-6
Figure 3.2-3	Russian River Boundary Detail – Proposed Action.....	3-7
Figure 3.2-4	Proposed Special Wildlife Protection Zone 3 – Tomales Point.....	3-16
Figure 3.2-5	Proposed Special Wildlife Protection Zone 4 – Point Reyes.....	3-17
Figure 3.2-6	Proposed Special Wildlife Protection Zone 5 – Duxbury Reef– Bolinas Lagoon.....	3-18
Figure 3.2-7	Proposed Special Wildlife Protection Zones 6 and 7 – Farallon Islands.....	3-19
Figure 3.2-8	Proposed Special Wildlife Protection Zone 1 – Point Arena.....	3-21
Figure 3.2-9	Proposed Special Wildlife Protection Zone 2 – Fort Ross.....	3-22
Figure 3.2-10	Proposed Cargo Vessel Prohibition Zones and Proposed White Shark Approach Prohibition Zones.....	3-23
Figure 3.2-11	Proposed MPWC Zones Overview.....	3-25
Figure 3.2-12	Proposed MPWC Zone 1.....	3-26
Figure 3.2-13	Proposed MPWC Zone 2.....	3-27
Figure 3.2-14	Proposed MPWC Zone 3.....	3-28
Figure 3.2-15	Proposed MPWC Zone 4.....	3-29
Figure 3.4-1	Existing Regulations Alternative – Cargo Vessel Prohibition Areas.....	3-37
Figure 3.4-2	Existing Regulations Alternative – Low Overflight Restriction Areas.....	3-38
Figure 3.6-1	Alternative MPWC Zone 2A.....	3-41

Figure 3.6-2	Alternative MPWC Zone 2B	3-43
Figure 3.6-3	Alternative MPWC Zone 4A	3-44
Figure 4.3-1	Southward Flow of Water from Upwelling Center at Point Arena	4.3-3
Figure 4.4-1	Number of Commercial Fishing Vessels Reporting Catches from the Proposed Expansion Area	4.4-3
Figure 4.4-2	Total Landings and Ex-vessel Revenue Reported to the Ports of the Study Area, 2000-2011	4.4-5
Figure 4.4-3	Landings of Select Fisheries from the Study Area, 2000-2011	4.4-7
Figure 4.6-1	Counties Included in the Study Area	4.6-2
Figure 4.6-2	Changes in Real Per Capita Income in the Study Area versus the U.S., California, and Mendocino and Sonoma Counties	4.6-5
Figure 4.6-3	Gender Distributions in the Study Area versus the U.S., California, and Mendocino and Sonoma Counties, 1990, 2000 and 2010	4.6-6
Figure 4.6-4	Race/Ethnicity in the Study Area versus the U.S., California, and Mendocino and Sonoma Counties, 2010	4.6-7
Figure 4.6-5	Race/Ethnicity in the Study Area, 1990, 2000 and 2010	4.6-7
Figure 4.6-6	Age Distributions in the Study Area versus the U.S., California, and Mendocino and Sonoma Counties, 2010	4.6-9
Figure 4.6-7	Age Distribution in the Study Area, 1990, 2000 and 2010	4.6-9
Figure 4.6-8	Labor Force Growth 1990-2000 and 2000-2010 in California versus the Study Area and Mendocino and Sonoma Counties	4.6-11
Figure 4.6-9	Income by Place of Work as a Percent of Income by Place of Residence in the Study Area versus California and Mendocino and Sonoma Counties, 2000, 2005 and 2010	4.6-13
Figure 4.6-10	Total Employment in the Study Area versus California and Mendocino and Sonoma Counties 1990-2000 and 2000-2010	4.6-14
Figure 4.6-11	Proprietors' Employment as a percent of Total Employment in the Study Area versus California and Mendocino and Sonoma Counties, 2000, 2005 and 2010	4.6-15
Figure 4.6-12	Proprietors' Income as a Percent of Total Income in the Study Area versus California and Mendocino and Sonoma Counties, 2000, 2005 and 2010	4.6-16
Figure 4.6-13	Percent of Personal Income by Industry for the Study Area versus California and Mendocino and Sonoma Counties, 2010	4.6-17
Figure 4.6-14	Percent of Employment by Industry for the Study Area versus California, 2010	4.6-18
Figure 4.6-15	Wildlife Viewing from Sea Use Pattern in and Adjacent to Study Area 2008-2009	4.6-25
Figure 4.6-16	Motorized Boating Use Pattern in and Adjacent to Study Area 2008-2009	4.6-26
Figure 4.7-1	Oil Basins in Study Area	4.7-2
Figure 4.8-1	Marine Transportation – VTS Area	4.8-2
Figure 4.8-2	Large vessels such as cruise ships and cargo vessels have the potential to directly impact marine mammals	4.8-3

Appendices


Appendix A	Index
Appendix B	Findings and Determinations [to be included in Final EIS]
Appendix C	Relationship to Other Legal Requirements [to be included in Final EIS]
Appendix D	Revised Terms of CBNMS and GFNMS Designation
Appendix E	List of EIS Preparers
Appendix F	Agencies and Persons Consulted
Appendix G	Biological Resources Species Lists
Appendix H	EIS Distribution List

LIST OF ACRONYMS

AFB	Air Force Base
AIS	Automatic Identification System
APCD	Air Pollution Control District
APPS	Act to Prevent Pollution from Ships
AQMD	Air Quality Management District
ASBS	Areas of Special Biological Significance
BAAQMD	Bay Area Air Quality Management District
BEA	Bureau of Economic Analysis
BLM	Bureau of Land Management
BOEM	Bureau of Ocean Energy Management
BP	Before Present
CAMSPAC	Communications Area Master Station Pacific
CARB	California Air Resources Board
CBNMS	Cordell Bank National Marine Sanctuary
CCA	California Coastal Act
CCAA	California Clean Air Act
CCNM	California Coastal National Monument
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability System
CESA	California Endangered Species Act
CFIS	California Fishery Information System
CFR	Code of Federal Regulations
CPFV	Commercial passenger fishing vessel
CSLC	California State Lands Commission
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DEIS	Draft Environmental Impact Statement
DHS	Department of Homeland Security
DMP	Draft management plan
DOD	Department of Defense
DOI	Department of the Interior
DPS	Distinct population segment

DST	Dover sole, thornyheads, and sable fish
ECA	Emissions Control Area
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
ENSO	El Niño/Southern Oscillation
ESA	Endangered Species Act
ESU	Evolutionarily significant unit
FAA	Federal Aviation Administration
FCAA	Federal Clean Air Act
FERC	Federal Energy Regulatory Commission
FMPs	Fishery management plans
FWPCA	Federal Water Pollution Control Act
GHG	Greenhouse gas
GRT	Gross registered tons
HAPC	Habitat Areas of Particular Concern
IFQ	Individual fishing quota
IMO	International Maritime Organization
JMPR	Joint Management Plan Review
LCP	Local Coastal Program
LME	Large Marine Ecosystem
MARPOL	Marine Plastic Pollution and Control Act
MBNMS	Monterey Bay National Marine Sanctuary
MBTA	Migratory Bird Treaty Act
MHK	Marine and hydrokinetic energy
MHWL	Mean high water line
MLMA	Marine Life Management Act
MLPA	Marine Life Protection Act
MMA	Marine Managed Area
MMPA	Marine Mammal Protection
MOTCO	Military Ocean Terminal
MPA	Marine Protected Area
MPCD	Marine pollution control device
MPRSA	Marine Protection, Research, and Sanctuaries Act
MPWC	Motorized personal watercraft
MS4	Municipal separate storm sewer system
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSD	Marine Sanitation Device
NAAQS	National ambient air quality standard

NAICS	North American Industry Classification System
NANPCA	National Aquatic Nuisance Prevention and Control Act
NCAB	North Coast Air Basin
NCP	National Contingency Plan
NDZ	No Discharge Zone
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service or NOAA Fisheries
NMSA	National Marine Sanctuaries Act
NMSS	National Marine Sanctuary System
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
OGV	Ocean-going vessel
ONMS	Office of National Marine Sanctuaries
OREP	Office of Renewable Energy Programs
OTEC	Ocean Thermal Energy Conversion
PDO	Pacific (inter)Decadal Oscillation
PFMC	Pacific Fishery Management Council
PISCO	Partnership for Interdisciplinary Studies of Coastal Oceans
PM10	10-micron particulate matter
PM2.5	2.5-micron particulate matter
PRNS	Point Reyes National Seashore
PWSA	Ports and Waterways Safety Act
RCA	Rockfish Conservation Area
RCRA	Resource Conservation and Recovery Act
RHA	Rivers and Harbors Appropriations Act
ROD	Record of Decision
ROV	Remotely operated vessel
SAC	Sanctuary Advisory Council
SCWA	Sonoma County Water Agency
SFAB	San Francisco Air Basin
SF-DODS	San Francisco Deep Ocean Disposal Site
SHPO	State Historic Preservation Officer
SLA	Submerged Lands Act



sVGP	small Vessel General Permit
SWPZ	Special Wildlife Protection Zone
SWRCB	State Water Resources Control Board
SWQPA	State water quality protection area
THPO	Tribal Historic Preservation Officer
TMDL	Total maximum daily load
TRACEN	U.S. Coast Guard Training Center
TSS	Traffic Separation Scheme
UNDS	Uniform National Discharge Standards
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
U.S.C.	United States Code
USCG	U.S. Coast Guard
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UTRR	Undiscovered technically recoverable reserves
VGP	Vessel General Permit
VMRS	Vessel Movement Reporting System
VTs	Vessel Traffic Service
VTSS	Vessel traffic service/separation

EXECUTIVE SUMMARY

Background, Purpose and Need

This Draft Environmental Impact Statement (DEIS) is an evaluation of the potential environmental impacts of expanding the boundaries of Cordell Bank and Gulf of the Farallones national marine sanctuaries and establishing regulations for the management of the expanded sanctuaries. This DEIS also evaluates proposed regulatory changes that would apply to existing sanctuary boundaries. NOAA is considering expansion of CBNMS and GFNMS to an area north of the existing sanctuaries that extends from Bodega Bay in Sonoma County, to just south of Alder Creek in Mendocino County, and west beyond the continental shelf.

The draft management plans (DMP) for each sanctuary are published separately. They include information about the sanctuaries' environment and resources, regulations and boundaries, staffing and administration, priority management issues, and actions proposed to address them over the next five to ten years. The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) is the lead agency for this proposed project.

This DEIS has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code (U.S.C.) § 4321 *et seq.*) and its implementing regulations (40 Code of Federal Regulations (CFR) Parts 1500-1508). This DEIS presents information to understand the potential environmental consequences of the proposed action and alternatives.

Section 304(a)(4) of the NMSA requires that "terms of designation may be modified only by the same procedures by which the original designation is made." When CBNMS and GFNMS were under consideration for establishment under the NMSA, EISs were prepared prior to their designations as required by the NMSA. As such, since the proposed action would modify the sanctuaries' terms of designation, the NMSA requires preparation of an EIS regardless of the significance of the impacts of the alteration.

Background

In 2001, NOAA received public comment during joint management plan review scoping meetings requesting that CBNMS and GFNMS be expanded north and west. In response, the revised sanctuary management plans completed in 2008 include strategies to facilitate a public process to ensure that boundaries are inclusive of the area's natural resource and ecological qualities, including the biogeographic representation of the area.

Since 2003, sanctuary advisory councils from both sites have regularly discussed expansion northward of the sanctuaries. Beginning in 2004, then Congresswoman Lynn Woolsey, joined later by Senator Barbara Boxer, repeatedly introduced legislation to expand both of these national marine sanctuaries. Interest in

expanding CBNMS and GFNMS stemmed from a desire to protect the biologically productive underwater habitat and important upwelling center that is the source of nutrient rich waters.

At times during review of the proposed expansion legislation, NOAA expressed support for the expansion, including the boundary option the legislation proposed. In 2008, the joint management plan review for CBNMS and GFNMS included strategies for the managers of these sanctuaries to facilitate a public process within five years to evaluate boundary alternatives that ensured maintenance of the area's natural ecosystem, including its contribution to biological productivity. The aim was to ensure the sanctuaries' boundaries were inclusive of the area's natural resource, ecological qualities, and biogeographic representation of the area. Accordingly, in compliance with Section 304(e) of the National Marine Sanctuaries Act (NMSA; 16 U.S.C. § 1431 *et seq.*) NOAA initiated the public process in December 2012 to evaluate and assess a proposed expansion of the sanctuaries. In doing so, NOAA is considering extending, and as necessary amending, the regulations and management plan for CBNMS and GFNMS to this area. Additional information on the background of the proposed action is available at <http://farallones.noaa.gov/manage/expansion/cbgf.html>.

Project Location

Figure ES-1 shows the regional location of the proposed expansion area, including the existing and proposed sanctuary boundaries and surrounding area. The proposed expansion area covers the offshore coastal area from Bodega Bay in Sonoma County to a point just south of Alder Creek in Mendocino County. It also includes extension of CBNMS farther west offshore of Marin County and north to include Bodega Canyon. The total expansion area is 2771 square miles (sq miles) (2093 square nautical miles [sq nm]). Approximately 757 sq miles (572 sq nm) of offshore ocean waters and the submerged lands under those waters would be added to the existing CBNMS size of 528 sq miles (399 sq nm), for a total size of approximately 1286 sq miles (971 sq nm). The expanded GFNMS area would be north of the existing GFNMS and would add approximately 2014 sq miles (1521 sq nm) to the existing 1279 sq miles (966 sq nm) sanctuary, with a total size of approximately 3297 sq miles (2490 sq nm) (including the additional four sq miles of restored wetlands on the Giacomini property).

Purpose and Need

The purpose of this action, expansion of CBNMS and GFNMS to an area north and west of their current boundaries, is to extend national marine sanctuary protection to an area that has significant marine resources and habitats and is the source of nutrient-rich upwelled waters for the existing marine sanctuaries. This expansion would encompass a globally significant coastal upwelling center originating off Point Arena and flowing into GFNMS and CBNMS via wind driven currents. The proposed action would also carry over existing regulations into the expansion area, amend current regulations for GFNMS and CBNMS, and add new regulations. These regulatory changes would provide for comprehensive management and protection of the resources of the area encompassed by the current sanctuaries and the proposed expansion area.

Expansion of CBNMS and GFNMS to this area would protect one of the most consistent and intense coastal upwelling centers in all of North America and the spectacular marine ecosystem along the southern Mendocino and Sonoma Coast. Because of effects related to coastal topography and ocean circulation,

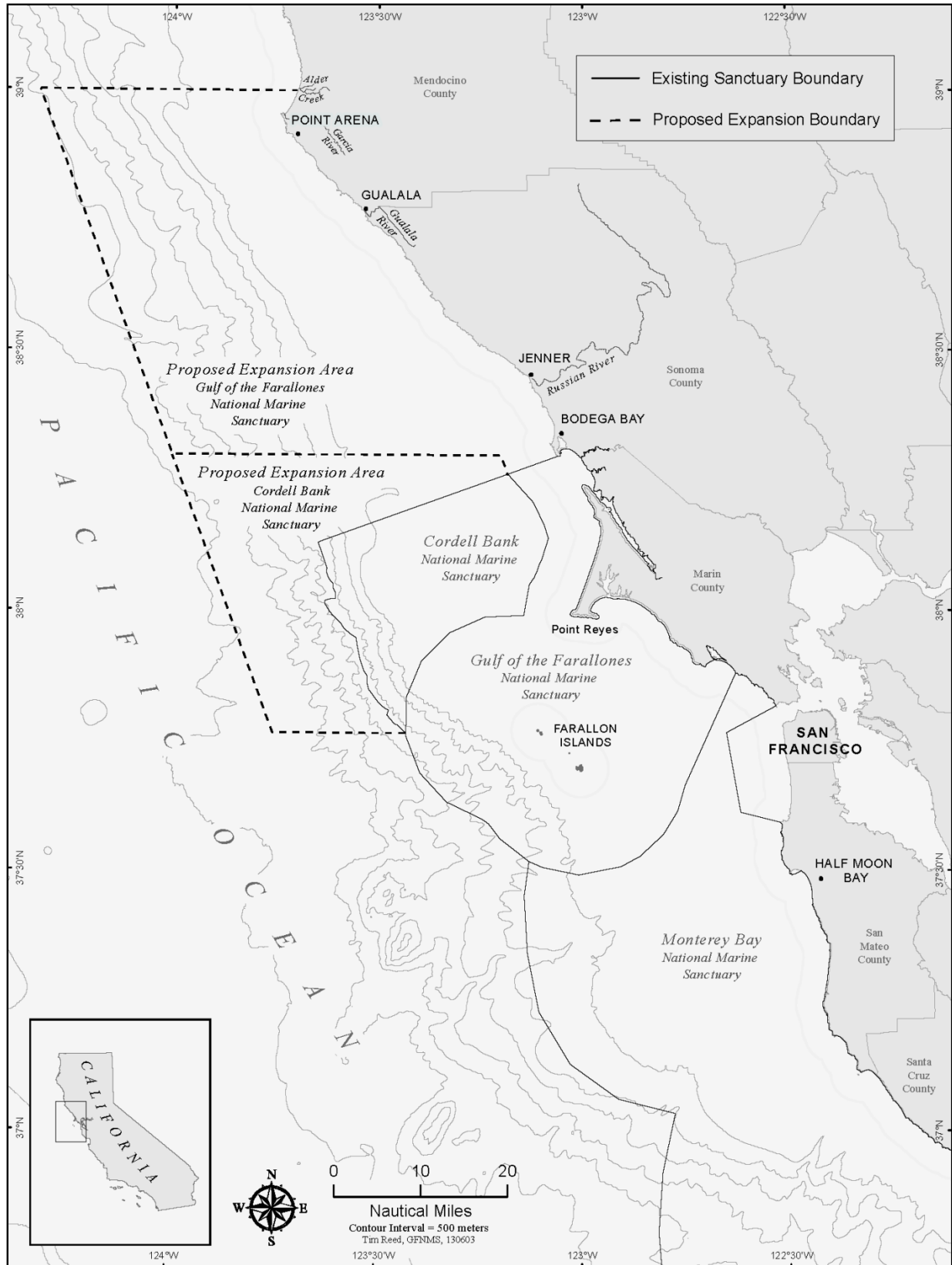


Figure ES-1. Regional Location of Proposed Expansion Area

upwelling at Point Arena is concentrated into a strong center or ‘cell’ distinctly different from upwelling along the California Current (see Figure 4.3-1 in Section 4.3 [Biological Resources]). The Point Arena upwelling center is largely separate from upwelling to the north and strongly linked with areas to the south; analysis of ocean currents, water properties, and chlorophyll show a strong association between water upwelled at Point Arena and coastal water masses off southern Mendocino, Sonoma and Marin Counties (Halle and Largier 2011). Upwelling currents at Point Arena carry nutrients to the surface where the prevailing wind driven surface currents transport the nutrient filled waters south along the Mendocino and Sonoma coast to the waters over Cordell Bank and around the Farallon Islands. These nutrients are the foundation of the food rich environment in the study area and promote the growth of organisms at all levels of the marine food web. The nutrients flowing from this upwelling center form the basis of support for a range of species, from plankton to predators. Cordell Bank is densely covered with invertebrates, and has hundreds of species of fish, seabirds and marine mammals in the ocean waters above and around it. Bodega Canyon is a prominent submarine feature in close proximity to Cordell Bank. This seafloor feature cuts across the continental shelf and slope north of Cordell Bank. Submarine canyons provide areas of high bathymetric complexity, support deep water communities, and effect local and regional circulation patterns. Bodega Canyon provides habitat for adult stages of groundfish including rockfish and flatfish that rear in nearshore waters and move offshore in their adult stages. In addition, offshore canyons and other bathymetric features are important foraging areas for seabirds and marine mammals. Offshore waters of the study area support large populations of krill, which are keystone species and form the basis of a productive marine food web.

The action would connect key geographic components of the Point Arena upwelling system, extending sanctuary boundaries from the source waters of the nutrient-based food web to existing areas of high biological productivity around the Farallon Islands and Cordell Bank. In addition, the thriving marine ecosystems along and offshore of southern Mendocino and Sonoma Counties would receive sanctuary protection. Expansion of the sanctuaries would also protect nationally significant seascapes and shipwrecks, and recreational and commercial uses, including fisheries, in the area.

The proposed expansion area’s nutrient-rich waters are integral parts of the overall marine ecosystem for these sanctuaries but are currently outside the sanctuaries’ boundaries. The upwelled water that emanates from Point Arena is the regional ecosystem driver for productivity in coastal waters of north central California. The source waters of CBNMS and GFNMS are not afforded the needed level of protections, management actions and programs that national marine sanctuaries provide. Including this area within CBNMS and GFNMS is critical to help conserve and protect resources by preventing or reducing human-caused impacts such as marine pollution and seabed disturbance, which have the potential to impact the proposed expansion area as well as downstream areas. The biological communities of these national marine sanctuaries are susceptible to damage from these and other select human activities. Additional protection is needed for the food-rich water flowing south from the Point Arena area that supports a marine food web made up of many species of algae, invertebrates, fish, seabirds, and marine mammals. Some species are transitory, travelling hundreds or thousands of miles to the region, such as endangered blue whales, albatross, shearwaters, king salmon, white and salmon sharks, while others live year round in the sanctuaries, such as Dungeness crab, sponges, other benthic invertebrates and many species of rockfish. Of note, the largest assemblage of breeding seabirds in the contiguous United States is at the

Farallon Islands, and each year their breeding success depends on a healthy and productive marine ecosystem so nesting adults and fledgling young can feed and flourish.

Existing laws and policies for the Point Arena upwelling area and south do not provide comprehensive and coordinated conservation and management to protect resources, and application of the NMSA through the sanctuaries' expansion would provide this needed safeguard while facilitating uses compatible with resource protection. In addition, community members and members of Congress have expressed their desire for and the need to ensure better protection of the sanctuaries' resources. Management of these nationally significant places under the National Marine Sanctuaries Act would provide protection through regulations pertaining to: discharge, altering the seabed, taking and possessing certain species, disturbing historical resources, introducing introduced species, attracting white sharks, approaching white sharks in certain designated zones, deserting a vessel, prohibiting oil, gas and minerals exploration, operating motorized personal watercrafts, flying aircrafts below 1,000 feet in certain designated zones, sailing cargo vessels in certain designated zones, prohibiting interference with an investigation, and providing the ability for GFNMS to authorize permits for certain currently prohibited activities, such as discharge and alteration of the submerged land in the sanctuary.

Scope of EIS

This EIS evaluates the environmental impacts associated with expansion of both CBNMS and GFNMS. Alternatives to the proposed action consist of slight variations in the proposed regulations and several localized boundary options. This EIS focuses on the regulatory changes that could affect the environment. Since the proposed action includes several modifications to existing sanctuary regulations, there are implications for the existing sanctuaries as well that are evaluated in this EIS.

Because there are specific proposed boundary and regulatory changes, both sanctuaries' terms of designation must be amended to establish authority for the new or modified regulations and boundaries (see Appendix D). These revisions, which are narrow in scope and correspond directly to the proposed boundary and regulatory changes, are included as part of the proposed action evaluated in this EIS.

Decisions to be Made

Decisions related to the proposed action include the following:

- Expansion of CBNMS and GFNMS boundaries;
- Proposed changes to the terms of designation for CBNMS and GFNMS;
- Proposed changes to regulations for CBNMS and GFNMS; and
- Revised management plans for CBNMS and GFNMS.

Public and Agency Involvement

According to Council on Environmental Quality (CEQ) regulations, federal agencies are required to "make diligent efforts to involve the public in preparing and implementing their NEPA procedures" (40 CFR § 1506.6[a]).

Scoping

On December 21, 2012, NOAA published a notice of intent (NOI) in the Federal Register, which notified the public of the proposed action, announced the three public scoping meetings, and solicited public comments. ONMS held public scoping meetings in Bodega Bay on January 24, 2013, Point Arena on February 12, 2013 and Gualala on February 13, 2013. Several hundred people participated in these meetings and provided input on specific issues to be analyzed or addressed as part of the environmental analysis for the proposed expansion of the sanctuary boundaries.

In addition to public scoping meetings, ONMS accepted written comments from December 21, 2012 to March 1, 2013. Comments were provided in the form of e-mails, letters, faxes, and electronic submissions on <http://www.regulations.gov>. During the comment period, the agency received over 300 comments. A website http://farallones.noaa.gov/manage/expansion_cbgf.html serves as a central location of project information while the EIS is being developed. The website provides a link <http://www.regulations.gov/#!docketDetail;D=NOAA-NOS-2012-0228> to access all of the scoping comments received on the project.

NOAA is working closely with a variety of pertinent resource agencies on the development of the EIS, the management plans, and the proposed regulations. NOAA has sought the input of numerous federal, state, and local officials and agencies in preparing this DEIS (see Appendix F).

Public Review of the Draft EIS

A public review period of at least 60 days follows the Notice of Availability for publication of the DEIS in the Federal Register. Availability of the DEIS was announced in the Federal Register, on various e-mail lists, on the project website, and in local newspapers. In addition, copies of the DEIS are available for review in numerous locations, such as libraries, throughout the study area (locations will be published with notice of availability in local newspapers). Public hearings will be held no sooner than 30 days after the notice is published in the Federal Register.

During the public comment period, oral and written comments are anticipated from federal, state, and local agencies and officials, from organizations, and from interested individuals. After the public comment period is over, the comments will be reviewed. A summary of these comments and the corresponding responses from the agency will be included in the Final EIS. If necessary, changes will be made to the EIS as well as the proposed rule and draft management plans as a result of the public comments.

If NOAA moves forward with a final action, it will issue a Final EIS, after which a 30-day mandatory waiting period will occur, and then NOAA may issue its record of decision (ROD). In addition, a final rule that promulgates changes to the regulations and terms of designation of the sanctuaries would be published in the Federal Register.

Summary of Proposed Action and Alternatives

There are a total of five alternatives, several of which are sub-alternatives:

- The proposed action includes modifications to the existing sanctuary regulations and expansion of the boundaries of both the CBNMS and GFNMS;

- The existing regulations alternative represents a second regulatory alternative, with the same proposed sanctuary expansion boundary as the proposed action;
- The no action alternative represents the condition in which the sanctuaries are not expanded and the sanctuary regulations are not modified;
- The Arena Cove boundary alternative is a sub-alternative that includes all of Arena Cove in the sanctuary expansion area and could be implemented with either the proposed action regulations or existing regulations alternative; and
- The Motorized Personal Watercraft (MPWC) zone alternative is a sub-alternative to the proposed action, involving slight alterations of proposed MPWC operation zone boundaries.

The alternatives are summarized in the following subsections.

Proposed Action

The proposed action represents the preferred alternative and involves expanding both GFNMS and CBNMS boundaries, as well as applying a set of sanctuary regulations that have been tailored for more targeted protection of the area's resources. Some of the GFNMS and CBNMS regulations would be extended to the expansion area without changes, some existing regulations would be altered and applied to both the existing and expanded sanctuaries, and some new regulations would be added in order to best suit the resource protection needs of the expanded sanctuaries. Each sanctuary's terms of designation would be modified to reflect the expanded boundaries, and each sanctuary's management plan would be updated.

Boundary Area

The proposed action involves expanding the boundaries of CBNMS and GFNMS to include waters and submerged lands offshore Sonoma and Mendocino Counties. The overall expansion area would be to the north and west, encompassing waters adjacent to the Sonoma coast and a portion of the Mendocino coast up to a point just south of Alder Creek. The western boundary would be generally aligned with the 1500 fathom depth contour. The northern area would become part of GFNMS. The proposed CBNMS expansion area includes area to the north and west of the existing sanctuary, offshore Marin County. The proposed boundaries are shown in Figure ES-1.

Proposed Regulations

Since the proposed action includes expansion of both CBNMS and GFNMS, the expansion area would be subject to NOAA regulations (CFR Title 15, Part 922) that apply to national marine sanctuaries (Subparts A, D and E, unless noted otherwise) and to the individual regulations of these two sanctuaries (Subparts K and H, respectively). There are several slight differences between the regulations of the two sanctuaries. The regulations for both sanctuaries include definitions, prohibited activities and other regulated uses and permit processes and issuance criteria. In order to design the sanctuary regulations for the existing and anticipated uses in both the current sanctuaries and the proposed expansion area, the existing regulations of CBNMS and GFNMS would be slightly modified. These revisions would apply to both the existing sanctuaries and proposed expansion area. The proposed regulations for the two sanctuaries are described

below and any substantive differences between existing and proposed regulations are noted. The full text of the proposed regulations is included in the proposed rule, published by NOAA in the Federal Register.

CBNMS

The following prohibitions and permit requirements as modified from current regulations would be applied to both the existing sanctuary and the expansion area. Regulations that are new or substantially modified from existing regulations are noted with an asterisk (*).

Prohibited Activities

The following activities would be prohibited within the sanctuary (including both existing sanctuary and proposed sanctuary expansion area¹:

- Oil, gas or mineral exploration, development or production.
- Discharging or depositing into the sanctuary, other than from a cruise ship, any material except:
 - Fish, fish parts, chumming materials or bait, used in lawful fishing;
 - For a vessel less than 300 gross registered tons (GRT):
 - clean effluent generated incidental to vessel use and generated by an operable Type I or II marine sanitation device (MSD; U.S. Coast Guard classification); and
 - clean graywater*²;
 - For a vessel 300 GRT or greater without sufficient tank capacity to hold sewage and/or graywater while within the sanctuary:
 - clean effluent generated incidental to vessel use and generated by an operable Type I or II marine sanitation device (U.S. Coast Guard classification); and
 - clean graywater*;
 - Clean vessel deck wash down, clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, or anchor wash; or
 - Vessel engine or generator exhaust.
- Discharging from a cruise ship except clean vessel engine cooling water, clean vessel generator cooling water, vessel engine or generator exhaust, clean bilge water, or anchor wash.
- Discharging or depositing, from beyond the boundary of the sanctuary, any material that subsequently enters the sanctuary and injures a sanctuary resource or quality, with the same exceptions as listed above.

¹ The order of prohibitions has been modified from the order in the existing regulations.

² Graywater is defined in section 312 of the Clean Water Act as galley, bath, and shower water. Clean means not containing detectable levels of harmful matter.

- Removing, taking, or injuring benthic invertebrates or algae located on or within the line representing the 50-fathom isobath surrounding Cordell Bank. (This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States)).
- Drilling into, dredging, or otherwise altering the submerged lands within the line representing the 50-fathom isobath surrounding Cordell Bank; or constructing, placing, or abandoning any structure or material on or in the submerged lands. (This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States)).
- Beyond the line representing the 50-fathom isobath surrounding Cordell Bank, drilling into, dredging, or otherwise altering the submerged lands; or constructing, placing, or abandoning any structure or material on the submerged lands except for anchoring any vessel or lawful use of any fishing gear.
- Taking any marine mammal, sea turtle, or bird, except as authorized by existing regulations.
- Possessing within the sanctuary any marine mammal, sea turtle or bird taken, except as authorized by existing regulations or as necessary for law enforcement purposes.
- Possessing, moving, removing, or injuring a sanctuary historical resource.*
- Introducing or otherwise releasing an introduced species, except striped bass (*Morone saxatilis*) released during catch and release fishing activity.
- Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of regulations.*

Exceptions and Authorizations

There are proposed exceptions to the above prohibitions, as well as a new proposed authorization procedure to allow certain activities:

- Exceptions for Emergencies – The above prohibitions do not apply to activities necessary to respond to an emergency threatening life, property or the environment, or as may be permitted by the Sanctuary Superintendent, with authority delegated by the ONMS Director, in accordance with criteria outlined in 15 CFR § 922.48 (National Marine Sanctuary permits – application procedures and issuance criteria) and specifically allowed within the CBNMS permit procedures and criteria 15 CFR § 922.113.
- Department of Defense – All activities carried out by the Department of Defense (DOD) on the effective date of expansion that are necessary for national defense are exempt from the above prohibitions; other such activities will be exempted after consultation between the Department of Commerce and the DOD. DOD activities not necessary for national defense, such as routine exercises and vessel operations, are subject to all prohibitions contained in the regulations in this subpart.
- Authorizations* – A new authorization authority would establish a mechanism for the sanctuary to potentially allow several specific prohibited activities within the existing sanctuary and the proposed

expansion area if they were approved by another authorizing entity and subject to terms and conditions of the sanctuary. This change would have implications for the existing sanctuary as well as the proposed expansion area. Activities potentially allowed by authorization would include discharges, submerged lands alteration beyond the line representing the 50-fathom isobath surrounding Cordell Bank, taking or possessing marine wildlife and possessing or injuring historic resources. Under no circumstance would oil or gas development be allowed.

- **Emergencies** – Where necessary to prevent immediate, serious, and irreversible damage to a sanctuary resource, any activity may be regulated on an emergency basis for up to 120 days.

Permits

The proposed regulations would extend permit procedures and criteria for issuing permits currently established in the sanctuaries to the expansion area. With authority delegated by the ONMS Director, the Sanctuary Superintendent may issue a permit for activities prohibited above, subject to terms and conditions. A permit may be issued for activities that will: further research or monitoring related to sanctuary resources and qualities; further the educational value of the sanctuary; further salvage or recovery operations in or near the sanctuary; or assist in managing the sanctuary. In no event may a permit be issued to allow oil, gas or mineral exploration, development or production.

GFNMS

For the proposed action, GFNMS would include similar new provisions listed above for CBNMS, as well as additional modified prohibitions. These regulations would be applied to the entire sanctuary, both existing and expanded boundaries. New or substantially modified regulations are noted with an asterisk (*).

Prohibited Activities

Several of the proposed prohibitions are the same as CBNMS, including prohibitions of: oil, gas or mineral development, discharges, taking any marine mammal, sea turtle, or bird, possessing any marine mammal, sea turtle, or bird, possessing, moving, removing, or injuring a sanctuary historical resource, and interfering with enforcement action*. In addition, the following activities would be prohibited within GFNMS (15 CFR 922.82, Prohibited or otherwise regulated activities):

- **Constructing any structure other than a navigation aid on or in the submerged lands of the sanctuary; placing or abandoning any structure on or in the submerged lands of the sanctuary; or drilling into, dredging, or otherwise altering the submerged lands of the sanctuary in any way, except:**
 - By anchoring vessels;
 - While conducting lawful fishing activities;
 - Routine maintenance and construction of docks and piers on Tomales Bay; or
 - Mariculture activities conducted pursuant to a valid lease, permit, license or other authorization issued by the State of California.
- **Operating motorized personal watercraft (MPWC), except:**

- For emergency search and rescue missions or law enforcement operations (other than routine training activities) carried out by the National Park Service, U.S. Coast Guard, Fire or Police Departments or other Federal, State or local jurisdictions; or
- For a MPWC equipped with a GPS unit within four designated zones in the expansion area of the sanctuary.*

The four proposed MPWC zones would avoid the proposed Special Wildlife Protection Zones (SWPZs) and include traditional coastal access points. The proposed MPWC zones would be located as follows (see Chapter 3, Description of Proposed Action and Alternatives, for maps of proposed locations):

- Zone 1 (From latitude 39 to Arena Cove) (Area: 6.4 sq nm) – This seasonal zone would be open from October to February. It would be closed from March to September to limit potential negative interactions with MPWC landing on Manchester beach during the time that Snowy Plovers, listed as threatened by the Endangered Species Act, nest on beach.
 - Zone 2 (From Arena Cove to Havens Neck) (Area: 19.8 sq nm) – Prominent visual markers at Arena Cove, Moat, Saunders Landing, Iverson Landing and Haven's Neck would be used to define the eastern boundary. The proposed zone would require MPWC users to stay seaward of all the listed points at all times. Use of waypoints at each of the shoreside locations would help operators with compliance.
 - Zone 3 (Timber Cove) (Area: 2.9 sq nm) – Zone 3 would be accessed through a boat ramp at Timber Cove.
 - Zone 4 (From Bodega Head to Coleman Beach) (Zone Area: 4.5 sq nm; Access Area: 0.3 sq nm) – A 100-yard access route from Bodega Harbor using the harbor entrance and two navigational buoys would allow entrance to the southern boundary of the zone. Seasonal access would also be available through Salmon Creek, at Bean Avenue and the Ranger's Station (see Figure 3.2-15).
- Introducing or otherwise releasing from within or into the sanctuary an introduced species, except: striped bass (*Morone saxatilis*) released during catch and release fishing activity — same as CBNMS; or species cultivated by mariculture activities in Tomales Bay pursuant to a valid lease, permit, license or other authorization issued by the State of California and in effect on the effective date of the final regulation.
 - Disturbing marine mammals or seabirds by flying motorized aircraft at less than 1000 feet over the waters within the seven designated SWPZs except to transport persons or supplies to or from the Farallon Islands or for enforcement purposes. Failure to maintain a minimum altitude of 1000 feet above ground level over such waters is presumed to disturb marine mammals or seabirds.*
 - Operating any cargo vessel engaged within an area extending one nm from a designated SWPZ.*

As part of these two regulations that reference SWPZs, the sanctuary would designate SWPZs instead of continuing to use Areas of Special Biological Significance (ASBS) and other specified locations. There would be a total of five SWPZs in the current sanctuary boundaries, which would be subject to protection from cargo vessel traffic and low flying aircraft. These zones include: Tomales Point, Point

Reyes, Duxbury Reef-Bolinas Lagoon, and two zones at the Farallon Islands (shown in Figures 3.2-4, 3.2-5, 3.2-6 and 3.2-7 in Chapter 3). Two zones would be created in the proposed expansion area near Gualala and Fort Ross (see Figures 3.2 8 and 3.2-9 in Chapter 3). They would be established in areas of high biological diversity and/or abundance of species including federally listed and specially protected species. SWPZs would be established where biological resources are susceptible to disturbance and need protection from certain activities that could harm these sensitive resources.

The existing GFNMS regulations use a combination of specified locations and State ASBS to protect sensitive seabird and pinniped areas from cargo vessel disturbance or discharge, and from low flying aircraft disturbance. ASBS are those areas designated by California's State Water Resources Control Board as requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. ASBS are a subset of State Water Quality Protection Areas established pursuant to California Public Resources Code section 36700 et seq. These areas were designated based on the presence of certain species or biological communities that, because of their value or fragility, deserve special protection by preserving and maintaining natural water quality conditions to the extent practicable.

Within the existing GFNMS boundaries, ASBS coincide with areas of high biological diversity and/or abundance of species, but the ASBS in the expansion area are not in locations that could provide adequate protections to wildlife if used for proposed cargo vessel or low flying aircraft prohibitions. Therefore, SWPZs are proposed to better reflect resource areas needing protection from cargo vessels and low flying aircraft and to provide consistency between the existing and proposed boundary areas.

In the existing sanctuary boundaries, the proposed boundaries of the new SWPZs are very similar to the areas currently protected from cargo vessels and low flying aircraft, which were defined as areas including a two nautical mile buffer or one nautical mile buffer, respectively, around the Farallon Islands, Bolinas Lagoon or any ASBS. A new definition to describe SWPZs, which approximately cover the areas where the low flying aircraft regulation currently apply, would be added to the GFNMS regulations. Cargo vessels would be required to sail at least one nautical mile from any SWPZ. The proposed new cargo vessel prohibition would remain similar in size and location to the areas currently protected from cargo vessels. Therefore, this proposed change in the current boundaries would result in a negligible change for transiting cargo vessels.

- Attracting a white shark in the sanctuary; or approaching within 50 meters of any white shark within one nautical mile of, and inside, the newly designated SWPZs around Southeast and North Farallon Islands. Currently, NOAA prohibits approaching within 50 meters of a white shark within two nautical miles of the Farallon Islands to prevent harassment and reduce disturbance of white sharks. The location and size of the zones would remain effectively similar to the current prohibition at both the Southeast and North Farallon Islands, however, the area around Middle Farallon Island would be removed resulting in a total area that is smaller than the existing zone. The previous zone was circular and surrounded all the Farallon Islands. The two new zones would be changed to a polygon and match the cargo vessel prohibition zones by creating a one nautical mile buffer around proposed SWPZs 6 and 7. Deserting a vessel aground, at anchor, or adrift in the sanctuary.
- Leaving harmful matter aboard a grounded or deserted vessel in the sanctuary.

- Anchoring a vessel in a designated seagrass protection zone in Tomales Bay, except as necessary for mariculture operations conducted pursuant to a valid lease, permit or license.

Exceptions and Authorizations

There are proposed exceptions to the above prohibitions, as well as a proposed authorization procedure to allow certain activities:

- Exceptions for Emergencies – same as CBNMS.
- Department of Defense – The exemption for DOD activities would be similar to the exemption in CBNMS. All activities currently carried out by DOD are considered essential for national defense and not subject to the prohibitions listed above. Any additional activities would be exempted only after consultation with the Sanctuary Superintendent and the Department of Defense.
- Authorizations* – As with CBNMS, this new authorization authority would potentially allow some specific otherwise prohibited activities listed above if they are authorized by a lease, permit, license, approval, or other authorization issued by another agency. As with CBNMS, this change would have implications for the existing sanctuary as well as the proposed expansion area. Activities potentially allowed by authorization would include discharges, construction on submerged lands, operating MPWC, taking or possessing marine wildlife and possessing or injuring historic resources. Introduction of a non-invasive introduced species from shellfish mariculture in State waters may also be allowed in GFNMS under this authorization process. Under no circumstance would oil, gas or minerals development be allowed.

Permits

The proposed GFNMS regulations would provide a permit process for otherwise prohibited activities and criteria for issuing permits, similar to the proposed CBNMS permit provisions, including findings listed above for CBNMS. The proposed regulations would extend permit procedures and criteria for issuing permits currently established in the sanctuary to the expansion area.

No Action Alternative

Evaluation of a No Action alternative is required under NEPA. The No Action alternative is equivalent to the status quo, with regard to sanctuary boundaries and regulations. No boundary adjustments would be made to include additional north central coast waters and no changes would be made to existing regulations or the terms of designation for either sanctuary. All management practices currently occurring in the north coast offshore area would continue. The No Action alternative would involve continuing to implement the current management plans and regulations for the two sanctuaries. Future development and activities in the proposed expansion area would be subject to existing federal and state regulations. No added protection of biological resources, water quality or cultural resources would be provided and the various educational and monitoring programs outlined in the sanctuary management plans would not be implemented in the proposed expansion area.

Existing Regulations Alternative

This alternative differs from the proposed action only in the application of regulations. The boundaries of each sanctuary would be the same as described for the proposed action. All relevant existing regulations for both GFNMS and CBNMS would be applied to their expanded boundaries. There would be no changes in regulations from those currently in effect. The differences from the proposed action are summarized as follows for each sanctuary.

CBNMS

- There would be no authorization process to potentially allow certain otherwise prohibited activities that are approved pursuant to a valid Federal, state or local lease, permit, license, approval or other authorization mechanism. The sanctuary could issue permits under its general permit authority, which would be limited to activities that: further research or monitoring related to sanctuary resources and qualities; further the educational value of the sanctuary; further salvage or recovery operations; or to assist management of the sanctuary.
- There would be no exemption for clean graywater discharges.
- Regulations would not prohibit possessing, moving, removing, or injuring historical resources.
- The prohibition against interfering with an enforcement action, as described for the proposed action, would not be included in this alternative.
- Permit procedures would not be modified to clarify that the regulations prohibit in all cases the issuance of national marine sanctuary permits for oil, gas or mineral exploration, development, or production. However, oil and gas facilities would be clearly listed as prohibited activities, as in the current regulations.

GFNMS

- Similar to CBNMS, the following changes outlined in the proposed action would not be implemented:
 - There would be no authorization authority to potentially allow certain otherwise prohibited activities except that oil and gas pipelines and non-invasive introduced species could be authorized in certain conditions. As with CBNMS, existing permitted uses could be certified under the national marine sanctuaries program regulations and the sanctuary could issue permits under its general permit authority which are the same as CBNMS.
 - There would be no exemption for clean graywater discharges.
 - The prohibition against interfering with an enforcement action would not be included in this alternative.
 - Permit procedures would not be modified to clarify that the regulations prohibit in all cases the issuance of general permits for oil, gas or mineral exploration, development, or production. However, oil and gas facilities would be clearly listed as prohibited activities, as in the current regulations.
- The existing exemption for oil and gas pipelines in GFNMS would remain, as described in the existing regulations, which would allow pipelines under specific conditions.

- MPWC operation would be prohibited in the expansion area, as it currently is prohibited within the existing GFNMS, without any zones where MPWC operation would be allowed, except when necessary for rescue/safety activities conducted by appropriate public safety agencies, as provided in the existing regulations.
- Cargo vessel prohibition areas would be designated within an area extending 2 nm from the existing ASBS in the expansion area: Saunders Reef, Del Mar Landing, Gerstle Cove and Bodega rather than establishing Special Wildlife Protection Zones, as described for the proposed action. Cargo vessel prohibition areas in the existing sanctuary would continue as they currently exist.
- Low overflight prohibitions would be designated within an area extending one nm at the four ASBS in the expansion area: Saunders Reef, Del Mar Landing, Gerstle Cove and Bodega. Low overflight prohibitions in the existing sanctuary would continue as they currently exist; no changes to their configuration within the existing sanctuary boundaries would occur.

Arena Cove Alternative

This alternative provides an option for including all of Arena Cove within the GFNMS boundary. This differs from the proposed action in that the proposed action excludes the existing pier and waters east (shoreward) of the pier. The boundary would extend to the Arena Cove mean high water line (MHWL) on the shore and would include docks, a pier and all moorings in Arena Cove. This boundary option could be implemented with either the proposed action targeted regulations or with the existing sanctuary regulations alternative.

MPWC Zones Alternative

This alternative provides different boundaries for two of the proposed MPWC zones in the GFNMS expansion area, as described below. There are two alternatives for MPWC Zone 2 and one alternative for Zone 4. The regulations and management plan would be the same as described for the proposed action.

- Zone 2A (From Arena Cove to Havens Neck) (Area 19.8 sq nm) – This alternative zone would create an offshore buffer of 1000 feet to keep MPWC away from the nearshore environment. It would allow for access closer to coves between Moat and Saunders Landing, and between Iversen Landing and Haven's Neck, and would be 0.2 sq nm larger than Zone 2 in the proposed action.
- Zone 2B (From Arena Cove to Havens Neck) (Area 21.5 sq nm) – The boundary of this alternative zone would go to the MHWL and would be 1.9 sq nm larger than Zone 2 in the proposed action. This option would allow MPWC users to land their craft at the two small beaches in this zone, in areas where there is not known breeding seabird colonies or pinniped pupping sites.
- Zone 4A (From Bodega Head to Duncan's Point) (Zone Area 4.3 sq nm; Access Area 0.3 sq nm) – This alternative zone would include, as its only entrance point, a 100-yard access route from Bodega Harbor to the zone using the harbor entrance and two navigational buoys. To further minimize the potential for nearshore impacts on wildlife, it would not allow access from Salmon Creek, Bean Avenue or the Ranger Station at Sonoma Coast State Beach. It would allow access farther north to Duncan's Point, a prominent landmark.



Summary of Impacts

Table ES-1 provides a summary of the impacts identified for the proposed action, the no action alternative, existing regulations alternative, Arena Cove boundary sub-alternative and MPWC zone alternative. None of the alternatives would result in a significant adverse impact on any of the resources or uses in the existing CBNMS or GFNMS or proposed expansion areas of the two sanctuaries. The two regulatory alternatives — the proposed action and existing regulations alternative — would result in similar beneficial impacts on natural resources and similar adverse impacts on other uses in the proposed expansion area.

Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Physical Resources					
Air Quality and Climate	+ Minor benefits from discharge prohibitions	O Status quo	+ Same as proposed action	+ Minor increase in benefit over proposed action due to larger area protected by sanctuary regulations	+ Same as proposed action
Oceanography and Geology	+ Minor benefits from seabed disturbance prohibition, however authorization process could allow some construction or other alteration of the seabed.	O Status quo	+ Slightly higher benefits than proposed action due to no authorization process which means that there would be less potential for activities that disturb the seabed	+ Negligible increase in benefit over proposed action due to larger area protected by sanctuary regulations	NA
Water Quality	+ Benefits from discharge, enter and injure, vessel abandonment prohibitions; minor adverse impact on existing sanctuaries from proposed exemption for graywater.	O Status quo, but lacking the protection offered by the proposed action	+ Slightly higher benefits than proposed action due to no graywater exemption and no authorization process to allow discharges	+ Slightly higher benefits than proposed action due to larger area protected by sanctuary regulations	+ Same as proposed action

Key to symbols:**O** = No Impact**~** = Less Than Significant Adverse Impact**-** = Significant Adverse Impact (Note: no alternative would result in that level of impact)**+** = Beneficial Impact

NA = Not Applicable

Table ES-1. Summary of Potential Resource Impacts

Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Biological Resources	<p>+</p> <p>Benefits from: prohibitions of discharges, seabed disturbance, vessel abandonment, wildlife take and disturbance; establishment of SWPZ and MPWC zones; cargo vessel restrictions; overflight restrictions; oil and gas development prohibition. Slight adverse impact in existing sanctuaries from new graywater exemption and authorization process that may allow activities such as discharges and seabed disturbance.</p>	<p>O</p> <p>Status quo, but lacking the protection offered by the proposed action</p>	<p>+</p> <p>Slightly higher benefits than proposed action due to no exception for clean graywater discharge, no potential for authorization of prohibited activities such as discharges and seabed disturbance</p>	<p>+</p> <p>Slightly higher benefits than proposed action due to larger area protected by sanctuary regulations</p>	<p>+</p> <p>Similar to proposed action. Alt. Zone 4A is smaller than the proposed action zone and restricts shoreline access points, which would have a slightly higher level of beneficial impact on biological resources.</p>

Key to symbols:**O** = No Impact**~** = Less Than Significant Adverse Impact**-** = Significant Adverse Impact (Note: no alternative would result in that level of impact)**+** = Beneficial Impact

NA = Not Applicable

Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Commercial Fishing and Aquaculture	<p>+ ~</p> <p>Beneficial effects on fisheries due to discharge, introduced species and oil and gas prohibitions. Minor adverse effects on fishing operations due to discharge and introduced species prohibitions</p>	<p>O</p> <p>Status quo</p>	<p>+ ~</p> <p>Slightly higher benefits and adverse impact than proposed action</p>	<p>+ ~</p> <p>Same as proposed action</p>	NA
Cultural and Maritime Heritage Resources	<p>+</p> <p>Increased protection from prohibition on taking or harming cultural resources; benefit from seabed disturbance prohibition</p>	<p>O</p> <p>Status quo, but lacking the protection offered by the proposed action</p>	<p>+</p> <p>Similar to proposed action, but no specific prohibition on harming cultural resources in CBNMS, so slightly less protection; slightly more potential protection with no authorization process to allow activities that might disturb cultural resources.</p>	<p>+</p> <p>Slightly higher benefit than proposed action due to implementation of protection in the cove</p>	NA
Socioeconomic Resources, Human Uses and Environmental Justice					
Socioeconomics*	O	O	O	O	NA

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NA = Not Applicable

Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Environmental Justice	<p>O</p> <p>Low-income and minority populations would not be disproportionately affected</p>	O	O	O	O
Tourism	<p>+</p> <p>Benefits from potentially improved resource and increased awareness due to sanctuary status</p>	O	<p>+</p> <p>Same as proposed action</p>	<p>+</p> <p>Same as proposed action</p>	NA
Land Use and Development	<p>~</p> <p>Some activities prohibited such as pier construction, placement of structures on seabed, unless authorized or permitted by the sanctuary</p>	O	<p>~</p> <p>Higher level of adverse impact than proposed action; no authorization process to approve new discharges or construction on seabed.</p>	<p>~</p> <p>Slightly higher level of adverse impact than proposed action; any future uses would be subject to sanctuary regulations and permits</p>	NA
Recreation	<p>~</p> <p>Due to limitations of MPWC and discharge prohibitions</p>	O	<p>~</p> <p>Higher level of adverse impact than proposed action due to stricter discharge regulations and MPWC prohibition</p>	<p>~</p> <p>Same as proposed action</p>	<p>~</p> <p>Same as proposed action</p>

Key to symbols:**O** = No Impact**~** = Less Than Significant Adverse Impact**—** = Significant Adverse Impact (Note: no alternative would result in that level of impact)**+** = Beneficial Impact

NA = Not Applicable

Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Research and Education	<p>+</p> <p>Benefits from sanctuary programs, possible increased research opportunities and higher quality resources due to sanctuary prohibitions</p>	<p>O</p>	<p>+</p> <p>Same as proposed action</p>	<p>+</p> <p>Same as proposed action</p>	<p>NA</p>
Offshore Energy Development	<p>~</p> <p>Prohibition of oil and gas development is not significant due to no existing or planned facilities; minor adverse effects on alternative energy due to compliance with sanctuary regulations</p>	<p>O</p>	<p>~</p> <p>Same as proposed action regarding oil and gas development; greater adverse impacts on alternative energy due to absence of authorization process to allow facilities that alter the seabed or have discharges.</p>	<p>~</p> <p>Same as proposed action</p>	<p>NA</p>

Key to symbols:**O** = No Impact**~** = Less Than Significant Adverse Impact**-** = Significant Adverse Impact (Note: no alternative would result in that level of impact)**+** = Beneficial Impact

NA = Not Applicable

Table ES-1. Summary of Potential Resource Impacts					
Resource	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative	MPWC Zones Alternative
Marine Transportation	~ Due to discharge and introduced species prohibitions	O	~ Slightly higher level of adverse impact than proposed action due to no exception for clean graywater discharges.	~ Similar to proposed action. Very minor increase in adverse impact due to application of discharge and other regulations to the cove.	NA
Homeland Security and Military Uses	~ Due to discharge and introduced species prohibitions	O	~ Slightly higher level of adverse impact than proposed action due to no exception for clean graywater discharges.	O	NA

*The impacts across all regulations for all regulatory alternatives in Socioeconomics are not expected to rise to the level that any negative impacts would occur. It is most likely there would be small positive impacts.

Key to symbols:

- O** = No Impact
- ~** = Less Than Significant Adverse Impact
- = Significant Adverse Impact (Note: no alternative would result in that level of impact)
- +** = Beneficial Impact
- NA = Not Applicable

Chapter 1

BACKGROUND

This Draft Environmental Impact Statement (DEIS) is an evaluation of the potential environmental impacts of expanding the boundaries of Cordell Bank and Gulf of the Farallones national marine sanctuaries and establishing regulations for the management of the expanded sanctuaries. This DEIS also evaluates proposed regulatory changes that would apply to existing sanctuary boundaries. NOAA is considering expansion of CBNMS and GFNMS to an area north of the existing sanctuaries that extends from Bodega Bay in Sonoma County, to just south of Alder Creek in Mendocino County, and west beyond the continental shelf.

Volumes 2 and 3 contain the draft management plans (DMP) for each sanctuary. These DMPs include information about the sanctuaries' environment and resources, regulations and boundaries, staffing and administration, priority management issues, and actions proposed to address them over the next five years. The proposed action and several alternative actions are described in Chapter 3 of this DEIS. The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) is the lead agency for this proposed project.

This DEIS has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code (U.S.C.) § 4321 et seq.) and its implementing regulations (40 Code of Federal Regulations (CFR) Parts 1500-1508). This DEIS presents to the decision makers and the public information required to understand the potential environmental consequences of the proposed action and alternatives.

This chapter provides background information on the Office of National Marine Sanctuaries (ONMS) and the authorities for establishing, expanding and managing the sanctuaries.

1.1 Statutory Authorities – National Marine Sanctuaries Act

The National Marine Sanctuaries Act (NMSA) of 1972, as amended (16 U.S.C. 1431 et. seq.) is the legislative mandate governing the ONMS. The NMSA authorizes the Secretary of Commerce to designate as national marine sanctuaries areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational or aesthetic qualities. Among the purposes and policies of the NMSA are the mandates to:

- identify and designate as national marine sanctuaries areas of the marine environment which are of special national significance and to manage these areas as the National Marine Sanctuary System (16 U.S.C. 1431 (b)(1));

- provide authority for comprehensive and coordinated conservation and management of these marine areas, and activities affecting them, in a manner which complements existing regulatory authorities (16 U.S.C. 1431 (b)(2));
- maintain the natural biological communities in the national marine sanctuaries, and to protect, and, where appropriate, restore and enhance natural habitats, populations and ecological processes (16 U.S.C. 1431 (b)(3)); and
- to develop and implement coordinated plans for the protection and management of these areas with appropriate Federal agencies, State and local governments, Native American tribes and organizations, and other public and private interests concerned with the continuing health of these areas (16 U.S.C. 1431 (b)(7)).

The expansion of CBNMS and GFNMS boundaries is consistent with and would further these purposes and policies, and would more comprehensively provide for coordinated conservation and management of these areas of special national significance and the resources within them.

1.2 The Office of National Marine Sanctuaries

The National Oceanic and Atmospheric Administration (NOAA) is charged with managing marine protected areas as the National Marine Sanctuary System (16 U.S.C. 1431 (b)(1)). The Office of National Marine Sanctuaries (ONMS) is the federal program within NOAA that manages the National Marine Sanctuary System. The mission of the ONMS is to identify, protect, conserve, and enhance the natural and cultural resources, values, and qualities of the National Marine Sanctuary System for this and future generations throughout the nation. The ONMS serves as the trustee for a network of 14 marine protected areas. The National Marine Sanctuary System encompasses more than 170,000 sq miles of marine and Great Lakes waters from Washington State to the Florida Keys and from New England to American Samoa (Figure 1.2-1). Within their protected waters, giant whales feed, breed and nurse their young, coral colonies flourish, and shipwrecks tell stories of our maritime history. Sanctuary habitats include beautiful rocky reefs, lush kelp forests, whale migration corridors and destinations, spectacular deep-sea canyons, and underwater archaeological sites. Areas managed by the ONMS range in size from one sq mile in the Monitor National Marine Sanctuary offshore of North Carolina to 13,581 sq miles in the National Marine Sanctuary of American Samoa and 140,000 sq miles in the Papahānāumokuākea Marine National Monument in the Northwestern Hawaiian Islands, which NOAA manages along with the U.S. Fish and Wildlife Service and the State of Hawaii under the Antiquities Act. Each national marine sanctuary or marine national monument is a unique place deserving of special protection. National marine sanctuaries serve as natural classrooms, cherished recreational spots and places for valuable commercial activities. They represent many things to many people and are part of our nation's legacy to future generations.

The National Marine Protected Areas (MPA) Center, established under Executive Order 13158 (May 2000), is a division of ONMS, with a mission to facilitate the effective use of science, technology, training, and information in the planning, management, and evaluation of the nation's system of MPAs. The MPA Center works in partnership with federal, state, tribal, and local governments and stakeholders to build a science-based, comprehensive national system of MPAs, and to support and enhance existing MPA programs across all levels of government.



Figure 1.2-1. The National Marine Sanctuaries System

The ONMS raises public awareness of sanctuary resources and conservation issues through programs of scientific research, monitoring, exploration, education and outreach. The ONMS provides oversight and coordination of the National Marine Sanctuary System by setting priorities for addressing resource management issues and directing program and policy development. To protect the living marine and non-living resources of sanctuaries, the ONMS works cooperatively with the public developing management plans for MPAs within the National Marine Sanctuary System consistent with the NMSA.

1.3 National Marine Sanctuaries as Marine Protected Areas

National marine sanctuaries, including CBNMS and GFNMS, are marine protected areas (MPAs). Executive Order No. 13158 (May 26, 2000, 65 F.R. 34909 Sec. 2. (a)) defines a marine protected area as “...any area of the marine environment that has been reserved by Federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein.” MPAs are geographical areas “where natural and/or cultural resources are given greater protection than the surrounding waters (E.O. 13158, 2000).”³ An MPA can be located in the open ocean, coastal areas, intertidal zones, estuaries, or protected areas of the Great Lakes. There are two other national marine sanctuaries off the California coast, Monterey Bay National Marine Sanctuary (MBNMS) and Channel Islands National Marine Sanctuary. A few illustrative examples of other types of California coastal marine protected areas managed by different management agencies, include Point Reyes National Seashore, Tijuana River National Estuarine Research Reserve, Point Arena State Marine Reserve, Southeast Farallon Island Marine Conservation Area, and Salmon Creek Coast Area of Special Biological Significance.

1.4 Comprehensive Management of the National Marine Sanctuary System

The NMSA includes a finding by Congress that the ONMS will “maintain for future generations the habitat and ecological services of the natural assemblage of living resources that inhabit [sanctuaries]” (16 U.S.C. 1431 (a)(4)(A),(C)). The NMSA further recognizes that “while the need to control the effects of particular activities has led to enactment of resource-specific legislation, these laws cannot in all cases provide a coordinated and comprehensive approach to the conservation and management of special areas

³ <http://marineprotectedareas.noaa.gov/aboutmpas/definition>

of the marine environment” (16 U.S.C. 1431 (a) (3)). Accordingly, the ONMS applies a broad and comprehensive management approach to meet the NMSA’s primary objective of resource protection (16 U.S.C. 1431 (b)(6)).

This comprehensive management approach serves as a framework for addressing long-term protection of a wide range of living and nonliving marine resources, while allowing multiple uses of the sanctuary to the extent that they are compatible with the primary goal of resource protection. The resources managed by the ONMS span diverse geographic, administrative, political and economic boundaries. Strong partnerships among resource management agencies, the scientific community, stakeholders and the public at-large are needed to realize the coordination and program integration that the NMSA calls for in order to comprehensively manage national marine sanctuaries.

1.5 CBNMS and GFNMS Management

Management of CBNMS and GFNMS are described below. As part of the expansion of these two national marine sanctuaries, NOAA would revise the management plans, regulations, and terms of designation for each site.

CBNMS

CBNMS was designated in 1989 to protect 529 sq miles (399 sq nm) around Cordell Bank, an underwater bank that rises from the seafloor to within 115 feet of the surface. CBNMS is located west and south of the Point Reyes peninsula, north of San Francisco, California and GFNMS. Its boundaries are contiguous with a portion of the GFNMS boundaries. CBNMS protects the undersea ridges and pinnacles of Cordell Bank and soft bottom areas surrounding the bank. CBNMS waters and habitats also serve as a biological hotspot and support a diverse community of life.

The management plan for CBNMS was updated in 2008, as part of the joint management plan review process. CBNMS and GFNMS managers work together under the framework of their management plans to coordinate cooperative management of the sanctuaries where appropriate, and also work with MBNMS management and a variety of other resource management entities and community partners in the region. Ecosystem protection and allowing human uses compatible with that purpose are major components of the CBNMS management plan. Key ecosystem protection issues include improving understanding of impacts from human uses and adopting management strategies to address the impacts in and around sanctuary waters, such as acoustic impacts and strikes of whales from ships; communication with fishery management authorities; and addressing marine debris. The plan also covers partnerships with community groups, education and outreach, and conservation science.

The sanctuary advisory council for CBNMS is a community-based body which regularly meets to provide advice to CBNMS management. The administrative office for CBNMS is located at the Point Reyes National Seashore headquarters in Point Reyes Station, California, and there is a display about the sanctuary at the National Seashore’s Visitor Center. In May 2013, the Oakland Museum of California opened a renovated science wing that dedicated an extensive exhibit focused on the rich and productive marine ecosystem protected by CBNMS. Also, the Cordell Marine Sanctuary Association is an organization dedicated to supporting CBNMS, including supporting CBNMS research and education efforts, partnerships, and increasing public awareness about CBNMS and its programs.

GFNMS

Designated in 1981, GFNMS spans 1,282 sq miles (966 sq nm) west and north of the San Francisco peninsula in California, and surrounds the Farallon Islands. GFNMS protects open ocean, nearshore tidal flats, rocky intertidal areas, estuarine wetlands, subtidal reefs, and coastal beaches within its boundaries. GFNMS waters and habitats support a diverse community of marine life above and below the surface, located in one of the most biologically productive regions in the world. In addition, GFNMS has administrative jurisdiction over the northern portion of Monterey Bay National Marine Sanctuary (MBNMS), from the San Mateo/Santa Cruz County line northward to the existing boundary between the two sanctuaries, which are contiguous. MBNMS remains the lead for water quality issues in this area.

GFNMS updated its management plan in 2008, as part of a joint management plan review process that included CBNMS and MBNMS. The GFNMS management plan offers a vision and course for protecting the rich marine ecosystems of ocean and coastal waters off north-central California while continuing to allow compatible, sustainable human uses. The result of more than seven years of study, planning and extensive public input, the management plan addresses key issues including ecosystem protection, wildlife disturbance, vessel traffic, water quality, non-native species, maritime heritage, conservation science, and education and outreach.

Sanctuary management receives advice from a sanctuary advisory council, a body of representatives of community constituencies that meets regularly. GFNMS maintains an administrative office and Visitor Center on Crissy Field in the Presidio of San Francisco. GFNMS also relies on an extensive network of volunteers to assist in data collection and outreach to the public. There is an active cooperating association, Farallones Marine Sanctuary Association, that supports and partners closely with GFNMS management on habitat restoration, science, volunteer, education and community awareness projects in the sanctuary.

1.6 Project Location and Background

Figure 1.6-1 shows the regional location of the proposed expansion area, including the existing and proposed sanctuary boundaries and surrounding area. The proposed GFNMS expansion area covers the offshore coastal area from Bodega Bay in Sonoma County to a point just south of Alder Creek in Mendocino County. The proposed CBNMS expansion area includes area to the north and west of the existing sanctuary, offshore Marin County.

In 2001, NOAA received public comment during joint management plan review scoping meetings requesting that CBNMS and GFNMS be expanded north and west. In response, the revised sanctuary management plans completed in 2008 include strategies to facilitate a public process to ensure that current boundaries are inclusive of the area's natural resource and ecological qualities, including the biogeographic representation of the area. These strategies include GFNMS Resource Protection Action Plan, Strategy RP-9 and CBNMS Administration Action Plan, Strategy AD-10.

Beginning in 2004, then Congresswoman Lynn Woolsey, joined later by Senator Barbara Boxer, repeatedly introduced legislation to expand both of these national marine sanctuaries but was never passed by Congress. Congressional, public, and NOAA interest in expanding CBNMS and GFNMS stemmed from a desire to protect the biologically productive underwater habitat and important upwelling center that is the source of nutrient rich waters (see Chapter 2, Purpose and Need).

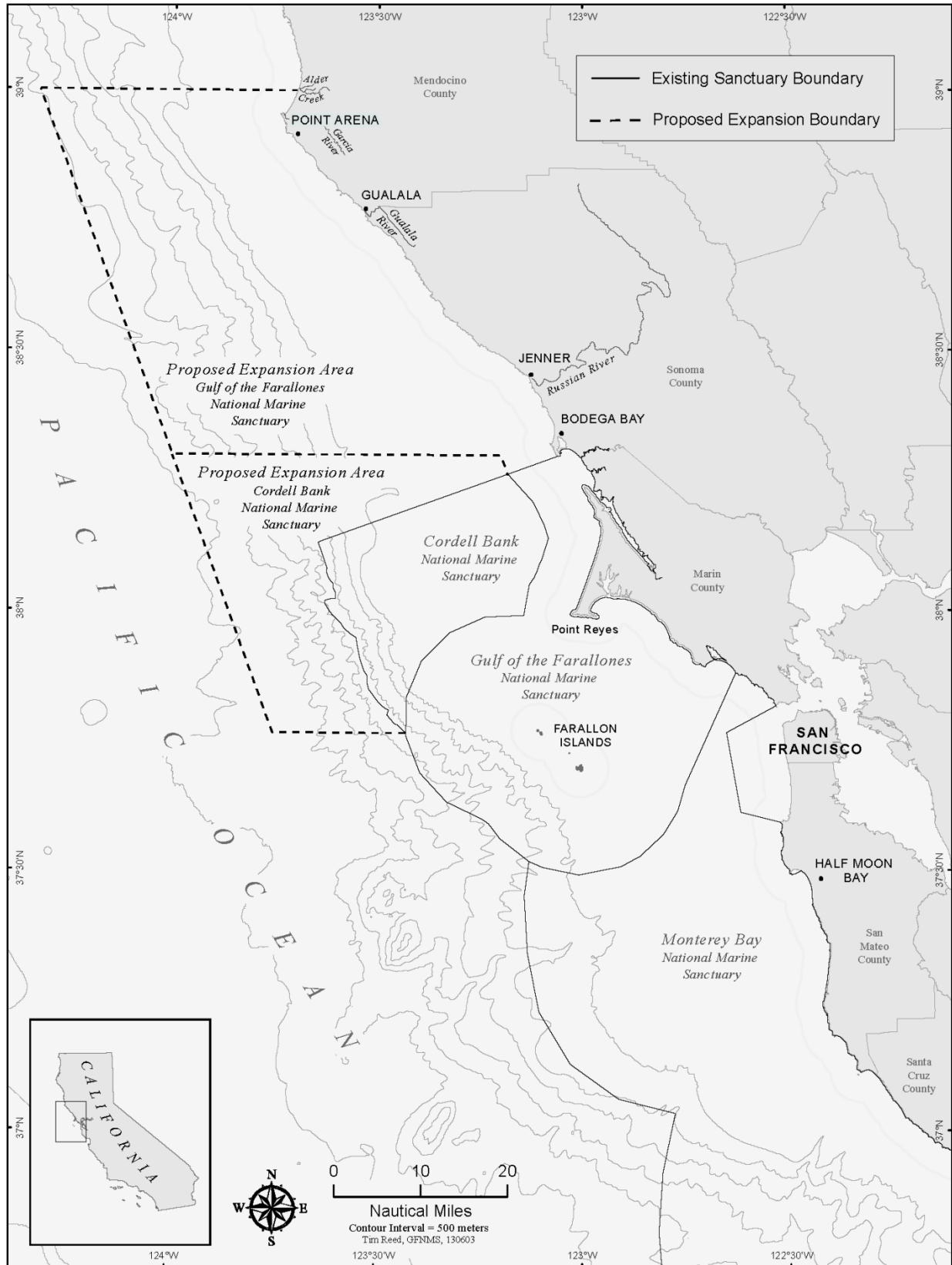


Figure 1.6-1. Regional Location of Proposed Expansion Area

In accordance with Section 304(e) of the NMSA, NOAA is now initiating a review of the boundaries for CBNMS and GFNMS to evaluate and assess a proposed expansion of the sanctuaries. In doing so, NOAA is considering extending, and as necessary amending, the regulations and management plan for CBNMS and GFNMS to this area. During the development of this action, it became clear that a wholesale extension of GFNMS and CBNMS regulations to the respective expansion areas would not be the most judicious approach in order to meet the goals of providing resource protection and allowing compatible uses. Therefore, NOAA is proposing to extend some of the regulations unchanged to the expansion area, amend some of the existing regulations, and add some new regulations. This proposed action would protect the upwelling source waters of the sanctuaries as well as nationally significant seascapes, wildlife, and shipwrecks, and would promote ecotourism. Additional information on the background of the proposed action is available at http://farallones.noaa.gov/manage/expansion_cbgf.html.

1.7 Public Involvement

According to Council on Environmental Quality (CEQ) regulations, federal agencies are required to “make diligent efforts to involve the public in preparing and implementing their NEPA procedures” (40 CFR § 1506.6[a]). The following section outlines public involvement in the proposed sanctuary expansion review process.

Scoping

One aspect of public involvement is the scoping process. Public involvement begins with a notice of intent (NOI) to prepare an environmental impact statement, which announces public scoping meetings. Public involvement extends to any NEPA-related public hearings or meetings (40 CFR § 1506.6[b]). Soliciting public comment begins when the NOI is published in the Federal Register and continues through the preparation of the EIS.

On December 21, 2012, NOAA published an NOI in the Federal Register, which notified the public of the proposed action, announced the three public scoping meetings, and solicited public comments. ONMS held public scoping meetings in Bodega Bay on January 24, 2013, Point Arena on February 12, 2013 and Gualala on February 13, 2013. Several hundred people participated in these meetings and provided input on specific issues to be analyzed or addressed as part of the environmental analysis for the proposed expansion of the sanctuary boundaries.

In addition to public scoping meetings, ONMS accepted written comments from December 21, 2012 to March 1, 2013. Comments were provided in the form of e-mails, letters, faxes, and electronic submissions on <http://www.regulations.gov>. During the comment period, the agency received over 300 comments; four of these submissions were compilations of comments provided at scoping meetings and a workshop. A website http://farallones.noaa.gov/manage/expansion_cbgf.html was launched to serve as a central location of project information while the EIS is being developed. The web site provides a link <http://www.regulations.gov/#!docketDetail;D=NOAA-NOS-2012-0228> to access all of the scoping comments received on the project, including oral comments made during the scoping meetings. In addition to formal scoping, both sanctuary advisory councils were briefed to provide an opportunity to identify issues for analysis in the EIS. ONMS analyzed all of the scoping comments; to the extent that comments raised issues that are relevant to potential impacts from the proposed expansion, these issues are addressed in the EIS.

Public Review of the Draft EIS

The next step of public involvement is to ensure wide circulation of the DEIS and to solicit public comments on this document. A public review period of at least 60 days follows publication of the DEIS. Availability of the DEIS was announced in the Federal Register, on various e-mail lists, on the project website, and in local newspapers. In addition, copies of the DEIS are available for review in numerous locations, such as libraries, throughout the study area (locations will be published with notice of availability in local newspapers). Public hearings will be held no sooner than 30 days after the notice is published in the Federal Register.

During the public comment period, oral and written comments are anticipated from federal, state, and local agencies and officials, from organizations, and from interested individuals. After the public comment period is over, the comments will be reviewed. A summary of these comments and the corresponding responses from the agency will be included in the Final EIS. If necessary, changes will be made to the EIS as well as the proposed rule and draft management plans as a result of the public comments.

If NOAA moves forward with a final action, it will issue a Final EIS, after which a 30-day mandatory waiting period will occur, and then NOAA may issue its record of decision (ROD). In addition, a final rule that promulgates changes to the regulations and terms of designation of the sanctuaries would be published in the Federal Register.

1.8 Organization of EIS

Chapter 1 is a background discussion of the statutory authorities, the Office of National Marine Sanctuaries, summary of existing CBNMS and GFNMS management, and overview of the public involvement process for the proposed action.

Chapter 2 (Purpose and Need) provides the reasoning behind the proposed action and a summary of the scope of the EIS and decisions to be made on the proposed action.

Chapter 3 (Description of the Proposed Action and Alternatives) describes the proposed boundaries of both sanctuaries and the proposed regulations to be implemented within the existing and expanded sanctuary boundaries. This chapter also includes a description of the alternatives screening process, several alternatives to the proposed action, the No Action alternative, and alternatives identified but removed from consideration.

Chapter 4 (Affected Environment and Environmental Consequences) is a description of the existing conditions in the study area to provide a baseline for assessing environmental impacts that may occur. The chapter includes an evaluation of potential impacts on the physical and biological environment, historical resources, and human uses, including socioeconomic impacts that may occur as a result of implementing the proposed action and alternatives. Direct, indirect, short-term, long-term, and cumulative impacts are evaluated. A separate alternatives comparison section is provided at the end of the chapter.

Chapter 5 (References) provides references for each section of the EIS.

The Appendices include an index, revised terms of designation, report preparers, agencies consulted, distribution list, and biological resources species lists.

Chapter 2

PURPOSE OF AND NEED FOR ACTION

The purpose and need for the action are based on statutory requirements and the ecological importance of maintaining, protecting and enhancing CBNMS and GFNMS marine resources and habitats, which are demonstrated to be of special national significance.

2.1 Purpose of Action

The purpose of this action, expansion of CBNMS and GFNMS to an area north and west of their current boundaries (Figure 1.6-1), is to increase protection of the environment. This expansion would add to the National Marine Sanctuary System a globally significant coastal upwelling center originating off Point Arena and flowing into GFNMS and CBNMS via wind driven currents. The proposed action would also carry over existing regulations into the expansion area, amend current regulations for GFNMS and CBNMS, and add new regulations. Together these regulatory changes would provide for comprehensive management and protection of the resources of the area encompassed by the current sanctuaries and the expansion area.

Expansion of CBNMS and GFNMS to this area would protect one of the most consistent and intense coastal upwelling centers in all of North America and the spectacular marine ecosystem along the southern Mendocino and Sonoma Coast. Because of effects related to coastal topography and ocean circulation, upwelling at Point Arena is concentrated into a strong center or ‘cell’ distinctly different from upwelling along the California Current. The Point Arena upwelling center is largely separate from upwelling to the north and strongly linked with areas to the south; analysis of ocean currents, water properties, and chlorophyll show a strong association between water upwelled at Point Arena and coastal water masses off southern Mendocino, Sonoma and Marin Counties (Halle and Largier 2011). Upwelling currents at Point Arena carry nutrients to the surface, where the prevailing wind driven surface currents then transport the nutrient filled waters south along the Mendocino and Sonoma coast to the waters over Cordell Bank and around the Farallon Islands. These nutrients are the foundation of the food rich environment in the study area, CBNMS and GFNMS, and promote the growth of organisms at all levels of the marine food web. The nutrients flowing from this upwelling center form the basis of support for a range of species, from plankton to predators. Cordell Bank is densely covered with invertebrates, and has hundreds of species of fish, seabirds and marine mammals in the ocean waters above and around it.

Bodega Canyon is a prominent submarine feature in close proximity to Cordell Bank. This seafloor feature cuts across the continental shelf and slope 2.5 to 5 nm (2.3-5.7 miles) north of Cordell Bank. Submarine canyons provide areas of high bathymetric complexity, support deep water communities, and effect local and regional circulation patterns. Bodega Canyon provides habitat for adult stages of groundfish including rockfish and flatfish that rear in nearshore waters and move offshore in their adult stages. In addi-

tion, offshore canyons and other bathymetric features are important foraging areas for seabirds and marine mammals (Yen et al. 2004). Bodega Canyon has a direct ecological link with CBNMS. It is well documented along that biological productivity along the west coast is enhanced in areas down current from submarine canyons (Pereyra et al. 1969). Each night, krill and other organisms migrate from the canyon edge into the upper layers of the water column. Prevailing currents carry these zooplankton to the south over the continental shelf and away from the canyon during the night. At first light when the krill descend, instead of returning to the canyon, they are trapped on the continental shelf where they are vulnerable to shelf dwelling predators (Chess et al. 1988). This vertical migration of zooplankton out of Bodega Canyon every night provides a constant supply of food for a variety of predators within CBNMS. Krill is an important link in the Cordell Bank food web and primary prey for blue whales, humpback whales, rockfishes and seabirds.

The Farallon Islands are significant sites for resting and breeding marine mammals and seabirds, and their surrounding waters contain one of the largest concentrations of adult white sharks, as well as many fish and invertebrate species. Thick forests of bull kelp create a thriving nearshore ecosystem along the southern Mendocino and Sonoma coast. When upwelling winds relax, surface currents flow to the north and provide nutrients and food from the south for kelp bed inhabitants. Offshore waters of the study area support large populations of krill, which are keystone species and form the basis of a productive marine food web.

The proposed action would connect key geographic components of the Point Arena upwelling system, extending sanctuary boundaries from the source waters of the nutrient-based food web to existing areas of high biological productivity around the Farallon Islands and Cordell Bank. In addition, the thriving marine ecosystems along and offshore of southern Mendocino and Sonoma Counties would receive sanctuary protection.

In addition to protecting living marine resources and their habitats, expansion of the sanctuaries would protect nationally significant seascapes and recreational and commercial uses, including fisheries, in the area.

Furthermore, the proposed action would protect significant submerged cultural resources and historical properties, as defined by the National Historic Preservation Act and its regulations. There are several existing state and federal laws that provide some degree of protection of historical resources, but the State of California regulations only extend 3 nm offshore and existing federal regulations do not provide comprehensive protection of these resources. Records document over 200 vessel and aircraft losses between 1820 and 1961 along California's north-central coast from Bodega Head north to Point Arena. Submerged archaeological remnants likely exist in the area. While there is no documentation of submerged Native American human settlements in the proposed boundary expansion area, some may exist there, since Coast Miwok and Pomo peoples have lived and harvested the resources of this abundant marine landscape for thousands of years. Sea level rise at the end of the last great Ice Age inundated a large area that was likely used by these peoples when it was dry land.

Expansion of the sanctuaries would require revision of each site's terms of designation and sanctuary regulations to cover the resources within the proposed area, benefitting current and future generations. In addition, CBNMS and GFNMS management plans would be revised and their programs would be extended to the area, covering resource protection, sustainable uses, research, and education.

2.2 Need for Action

The proposed expansion area's nutrient-rich waters from the Point Arena coastal upwelling (shown in Figure 4.3-1 in Section 4.3 [Biological Resources]) and the waters south to CBNMS and GFNMS are integral parts of the overall marine ecosystem for these sanctuaries but are currently outside the sanctuaries' boundaries. The upwelled water that emanates from Point Arena is the regional ecosystem driver for productivity in coastal waters of north central California. The source waters of CBNMS and GFNMS, and the study area are not afforded the needed level of protection, management actions and programs that national marine sanctuaries provide. Including this area within CBNMS and GFNMS is critical to help conserve and protect resources by preventing or reducing human-caused impacts such as marine pollution and seabed disturbance, which have the potential to impact the proposed expansion area as well as downstream areas. The biological communities of these national marine sanctuaries are susceptible to damage from these and other select human activities. Additional protection is needed for the food-rich water flowing south from the Point Arena area that supports a marine food web made up of many species of algae, invertebrates, fish, seabirds, and marine mammals. Some species are transitory, travelling hundreds or thousands of miles to the region, such as endangered blue whales, albatross, shearwaters, king salmon, white and salmon sharks, while others live year round in the sanctuaries, such as Dungeness crab, sponges, other benthic invertebrates and many species of rockfish. Of note, the largest assemblage of breeding seabirds in the contiguous United States is at the Farallon Islands, and each year their breeding success depends on a healthy and productive marine ecosystem so nesting adults and fledgling young can feed and flourish.

Purposes and policies of the NMSA (16 U.S.C. § 1431[b]) include these important mandates:

- "...to provide authority for comprehensive and coordinated conservation and management of these marine areas [national marine sanctuaries], and activities affecting them, in a manner which complements existing regulatory authorities; [and]
- to maintain the natural biological communities in the national marine sanctuaries, and to protect, and, where appropriate, restore and enhance natural habitats, populations and ecological processes..."

Existing laws and policies for the Point Arena upwelling area and south do not provide comprehensive and coordinated conservation and management to protect the resources, and application of the NMSA through the sanctuaries' expansion would provide this needed safeguard while facilitating uses compatible with resource protection. In addition, community members and members of Congress have expressed their desire for and the need to ensure better protection of the sanctuaries' resources.

The NMSA requires periodic review and evaluation of the progress in implementing the management plan and goals for each sanctuary. The management plans and regulations must be revised as necessary to fulfill the purposes and policies of the NMSA (16 U.S.C. 1434(e)) to ensure that each sanctuary continues to best conserve, protect, and enhance their nationally significant living and cultural resources.

Since 2003, sanctuary advisory councils from both sites have regularly discussed expansion northward of the sanctuaries and have expressed support for boundary expansion when proposed by local congressional members Representative Lynn Woolsey and Senator Barbara Boxer. At times during review of the proposed

expansion legislation, NOAA expressed support for the expansion, including the boundary option the legislation proposed.

In 2008, the joint management plan review for CBNMS and GFNMS included strategies for the managers of these sanctuaries to facilitate a public process within five years to evaluate boundary alternatives that ensured maintenance of the area's natural ecosystem, including its contribution to biological productivity. The aim was to ensure the sanctuaries' boundaries were inclusive of the area's natural resource, ecological qualities, and biogeographic representation of the area. Accordingly, NOAA initiated the public process to evaluate this action in December 2012.

2.3 Scope of EIS

NEPA requires federal agencies to prepare an environmental document to thoroughly assess the environmental impacts of major federal actions that could significantly affect the environment. The proposed expansion of CBNMS and GFNMS and the associated regulatory changes that would apply in the expansion area have been specifically developed to facilitate improved management and protection of identified priority resources. Therefore, incorporation of the area into the sanctuaries is intended to protect resources and generally reduce impacts of human activities on the environment. Even so, it is necessary to fully disclose and document the potential adverse and beneficial environmental effects of the proposed regulatory actions in a public process, consistent with NEPA and Council on Environmental Quality (CEQ) regulations implementing NEPA.

Additionally, Section 304(a)(4) of the NMSA requires that “terms of designation may be modified only by the same procedures by which the original designation is made.” When CBNMS and GFNMS were under consideration for establishment under the NMSA, EISs were prepared prior to their designations as required by the NMSA. As such, since the proposed action would modify the sanctuaries' terms of designation, the NMSA requires preparation of an EIS regardless of the significance of the impacts of the alteration.

This EIS evaluates the environmental impacts associated with expansion of both CBNMS and GFNMS, as well as modification of existing sanctuary regulations within the current GFNMS and CBNMS boundaries. Alternatives to the proposed action consist of slight variations in the proposed regulations and several localized boundary options. Specific boundary and regulatory changes contained within the proposed action and alternatives are described in detail in Chapter 3 of this EIS and are analyzed in terms of impacts in Chapter 4 of this EIS. Application of sanctuary regulations to the expanded area would result in either no effect or beneficial effects in most issue areas. This EIS focuses on the regulatory changes that could affect the environment. Since the proposed action includes modifications to existing sanctuary regulations, there are implications for the existing sanctuaries as well that are evaluated in Chapter 4 of this EIS.

Finally, this EIS presents proposed changes to each sanctuary's terms of designation (see Appendix D). As described in Section 2.2, in order to expand the sanctuary boundaries and implement the proposed regulations, ONMS would need to modify each sanctuary's terms of designation describing the new boundaries and the particular types of activities subject to sanctuary regulation.

This EIS is not an analysis of all activities set forth in the proposed sanctuary management plans. The bulk of the management plans is an extension of the management plans that have been in place since 2008 for

GFNMS and CBNMS. The management strategies and actions that sanctuary staff and their partners will use to address priority issues in the expansion area include targeted research, monitoring, education, outreach, coordination, and resource protection activities. Implementation of the proposed actions within the management plans, individually and cumulatively, would have no significant adverse impact on the environment. See Chapter 3 and 4 for additional details on the management plans.

It is important to note several other related processes that affect the scope of this EIS:

- The proposed action does not involve changes to sanctuary permit procedures, although it would add authorization authority to sanctuary regulations. A separate nationwide regulatory review process is underway to consolidate sanctuary permit regulations.
- NOAA is currently developing a programmatic NEPA analysis for West Coast regional field operations, many of which are designed to implement activities described in management plans that have the potential to affect the environment. The vast majority of activities presented in the draft CBNMS and GFNMS management plans would not have an impact on the environment because they are administrative in nature. In addition, the draft management plans describe strategies that could result in activities such as: vessel operations, ship operations, aircraft operations, non-motorized craft, SCUBA or snorkel operations, onshore fieldwork, deployment of autonomous underwater vehicles or remotely operated vehicles, deployment of remote sensing equipment, deployment of buoys, sampling protocols, facilities construction or onshore signage. However, the strategies laid out in the draft management plans are not detailed enough at this time to determine what specific field operations would be needed to implement them. As a result, operational decisions regarding field operations are not ripe for decision and therefore, are not ready to undergo a full analysis under NEPA at this time. Any potential impacts of those field operations would be considered in a separate NEPA action at the time that NOAA has determined what specific activities would need to be considered. For example, some field operations may be analyzed under the programmatic West Coast regional field operations NEPA analysis, or in a supplement to that analysis, or any construction of facilities or onshore signage may be analyzed in a separate facilities-related NEPA analysis.
- NOAA is currently working on a proposal to regulate introduced species in both the State and federal waters of GFNMS and MBNMS. As part of this separate rulemaking, the regulations for the GFNMS would contain a minor modification to the wording regarding exceptions for introduced species.
- A separate nationwide regulatory review process is currently underway in NOAA to consolidate some definitions of terms that are common across several national marine sanctuaries, which includes potential modifications to the definition of MPWC.

2.4 Decisions to be Made and Agency Coordination

Decisions related to the proposed action include the following:

- Expansion of CBNMS and GFNMS boundaries;
- Proposed changes to the terms of designation for CBNMS and GFNMS;
- Proposed changes to regulations for CBNMS and GFNMS; and
- Revised management plans for CBNMS and GFNMS.

The CEQ defines the rights and responsibilities of cooperating agencies in Section 1501.6 of the CEQ regulations. At the request of the lead agency, any other federal agency that has jurisdiction or that has special expertise with respect to any environmental issue will be a cooperating agency. No federal agencies were formally requested to be cooperating agencies, nor did any federal or state agencies request this status. NOAA is working closely with a variety of pertinent resource agencies on the development of the EIS, the management plans, and the proposed regulations. NOAA has sought the input of numerous federal, state, and local officials and agencies in preparing this DEIS; see Appendix F (Persons and Agencies Consulted).

Chapter 3

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This chapter includes a specific description of the components of the proposed action and identifies alternatives. The proposed action includes expansion of the boundaries of both CBNMS and GFNMS, application of existing sanctuary regulations to the expanded boundaries, modification of several existing regulations and corresponding changes to each sanctuary's terms of designation, and updates to each sanctuary management plan. The proposed action represents NOAA's "preferred alternative" (Section 3.2). Also in this section is a description of the alternatives to the proposed action, including the No Action alternative (Section 3.3), a regulatory alternative (Section 3.4), a boundary alternative for Arena Cove (Section 3.5), alternative zones for Motorized Personal Watercraft (MPWC) (Section 3.6) and a description of the alternatives that were initially considered but screened from full EIS analysis (Section 3.7). NOAA has carefully considered state and federal authorities in proposing new regulatory oversight to ensure protection and management of sanctuary resources. Proposed new authorities are intended to complement existing authorities.

Section 2.3 of this EIS describes the scope of the analysis, which is focused on regulatory changes that would apply to the proposed sanctuary expansion area and several proposed changes to existing regulations that would apply to activities within the existing sanctuary boundaries. The focus of this project description is on those components of the proposed regulations that have the potential to result in environmental or socioeconomic effects. The DEIS does not include a detailed assessment of the individual, issue-based action plans that are contained in the sanctuary management plans because they are based on the proposed regulations, which are fully analyzed in this EIS. The action plans within the management plans involve goals, strategies, activities, and planning tools for resource protection and education programs and sanctuary administration and are not anticipated to cause significant physical changes to the environment nor would they allow activities that are currently prohibited in the expansion area. As mentioned in Section 2.3, field operations that would implement the action plans will be analyzed in a regionally based programmatic environmental assessment currently under development. These action plans are described in detail in each sanctuary's draft updated management plan. The full draft management plans have been made available for review and comment with this DEIS.

3.1 Development of Alternatives

As described in Chapter 1, the proposed action is a result of the need to apply additional protection to California's north-central coast environment. In developing the proposed action and alternatives for analysis in this EIS, NOAA considered possible boundary and regulatory changes that would be consistent with achieving increased resource protection and would be appropriate for inclusion in the overall sanctuary

expansion proposal. The following screening criteria were used for determining both the proposed action and a range of reasonable alternatives:

- Alternative must be feasible;
- Alternative must be consistent with the purposes and policies of the NMSA;
- Alternative must be consistent with, and achieve the overall purpose and need, as established in Chapter 2 of this EIS;
- Alternative must be consistent with the purpose and goals of the management plans, which means that it must address resource management issues, generate beneficial environmental effects, and address uses or other activities that have an adverse effect on sanctuary resources;
- Alternative should allow for the incorporation and consideration of recent or best available data and scientific knowledge; and
- Alternative should maximize environmental benefits, while avoiding unnecessary adverse socio-economic impacts.

Alternatives that were initially considered but that did not meet the screening criteria above are listed in Section 3.6, Other Alternatives Considered and Eliminated.

Both boundary and regulatory alternatives were identified by agencies, businesses, non-profit organizations and citizens during the public scoping process. In addition, alternatives were identified and explored by sanctuary staff, based on their scientific, policy and management expertise.

All national marine sanctuaries are governed by NOAA regulations. Within the national marine sanctuary regulations, for each sanctuary, there is a set of individual site regulations that establish the sanctuary boundaries, administrative procedures, definitions, and prohibited activities. In addition, each sanctuary has a management plan that identifies specific programs and action plans for the management of the sanctuary. Therefore, there are several components to define for the proposed sanctuary expansion — boundaries, regulations, terms of designation and management plan actions.

Although each sanctuary has unique issues that are addressed by the site regulations, there are many issues in common between the two sanctuaries. For several issues, the proposed regulation is the same for each sanctuary, but in some cases the proposed regulation may differ between the two sanctuaries due to different conditions, circumstances, needs, and language used at the time of original designation.

The following text describes the proposed and alternative boundaries under consideration, as well as proposed and alternative substantive regulatory changes for each sanctuary. A detailed discussion of the regulatory text is included in the notice of proposed rulemaking concurrently published in the Federal Register.

3.2 Proposed Action

The proposed action represents the preferred alternative and involves expanding both GFNMS and CBNMS boundaries, as well as applying a set of sanctuary regulations that have been tailored for more targeted

protection of the area's resources. Some of the GFNMS and CBNMS regulations would be extended to the expansion area without changes, some regulations would be altered, and some new regulations would be added in order to best suit the resource protection needs of the expanded sanctuaries. The regulatory changes are described in detail below. Each sanctuary's terms of designation would be modified to reflect the expanded boundaries, and each sanctuary's management plan would be updated.

Boundary Area

The proposed action involves expanding the boundaries of CBNMS and GFNMS to include waters and submerged lands offshore Sonoma, Mendocino and Marin Counties. The overall expansion area would be to the north and west, encompassing waters adjacent to the Sonoma coast and a portion of the Mendocino coast up to a point just south of Alder Creek. The western boundary would be generally aligned with the 1500 fathom depth contour. The northern area would become part of GFNMS. The proposed CBNMS expansion area includes area to the north and west of the existing sanctuary, offshore Marin County. The proposed boundaries are shown in Figure 1.6-1 and described for each sanctuary in the following subsections. The exact boundary coordinates of the expanded sanctuaries have been published in the Federal Register as part of the notice of proposed rulemaking.

Proposed CBNMS Boundary

The expanded area adjacent to, and west and north of, the existing CBNMS would add approximately 757 sq miles (572 sq nm) of offshore ocean waters and the submerged lands under those waters to the existing approximately 528 sq miles (399 sq nm) sanctuary, for a total size of approximately 1286 sq miles (971 sq nm). The CBNMS expansion would take place primarily offshore Marin County, with a small portion of the area to encompass Bodega Canyon offshore of Sonoma County. Starting at the northernmost point of the existing CBNMS boundary, the proposed expanded CBNMS boundary would extend nearly 3 miles (2 nm) northwest to a point approximately 8 miles (6 nm) west of Bodega Head. From that point, the expanded sanctuary boundary would extend west approximately 44 miles (38 nm). It would then extend southeast approximately 39 miles (34 nm). It would then continue east 17 miles (15 nm) to a point where it would intersect the existing CBNMS and GFNMS boundaries. See Figure 1.6-1.

Proposed GFNMS Boundary

The expanded area would be north of the existing GFNMS and would add approximately 2014 sq miles (1521 sq nm) of coastal and ocean waters and submerged lands to the existing 1279 sq miles (966 sq nm) sanctuary, with a total size of 3297 sq miles (2490 sq nm) (including the additional four sq miles of restored wetlands on the Giacomini property).

The expansion area would extend along the Northern California Coast from the southern tip of Bodega Head in Sonoma County northward to the 39th parallel, north of Point Arena and south of Alder Creek in Mendocino County. The landward boundary is the Mean High Water Line (MHWL), except in specific areas. The seaward boundary extends along the continental slope, approximately 34 miles (26 nm) from shore at the northern boundary and approximately 50 miles (38 nm) from shore at the southern boundary. The northern boundary is the 39th parallel, and the southern boundary is where the expansion area meets the (expanded) CBNMS and the existing GFNMS. The expansion area does not include the Salmon Creek Estuary, the Russian River Estuary, the Gualala River Estuary, the Garcia River Estuary or the inner Arena Cove.

A close-up view of the proposed northern boundary near Alder Creek is shown in Figure 3.2-1. The proposed boundary at Arena Cove is shown in Figure 3.2-2 and the boundary at the Russian River is shown in Figure 3.2-3. The boundary at Arena Cove would be at the west end of the wharf (pier).

Proposed Regulations

Since the proposed action includes expansion of both CBNMS and GFNMS, the expansion area would be subject to NOAA regulations (CFR Title 15, Part 922) that apply to national marine sanctuaries (Subparts A, D and E, unless noted otherwise) and to the individual regulations of these two sanctuaries (Subparts K and H, respectively). There are several differences between the regulations of the two sanctuaries. The regulations for both sanctuaries include definitions, prohibited activities and other regulated uses and permit processes and issuance criteria. In order to design the sanctuary regulations for the existing and anticipated uses in both the current sanctuaries and the proposed expansion area, the existing regulations of CBNMS and GFNMS would be slightly modified. The proposed regulations for the two sanctuaries are described below and any substantive differences between existing and proposed regulations are noted. The full text of the proposed regulations is included in the proposed rule, published by NOAA in the Federal Register.

CBNMS

Few changes from existing regulations would occur. The following prohibitions and permit requirements as modified from current regulations would be applied to both the existing sanctuary and the expansion area. Definitions used in the regulations would generally remain the same as current definitions. Regulations that are new or substantially modified from existing regulations are noted with an asterisk (*).

Prohibited Activities

The following activities would be prohibited within the sanctuary (including both existing sanctuary and proposed sanctuary expansion area (15 CFR 922.112, Prohibited or otherwise regulated activities)¹:

- (1) Oil, gas or mineral exploration, development or production.
- (2) (i) Discharging or depositing into the sanctuary, other than from a cruise ship, any material except:
 - Fish, fish parts, chumming materials or bait, used in lawful fishing;
 - For a vessel less than 300 gross registered tons (GRT):
 - clean effluent generated incidental to vessel use and generated by an operable Type I or II marine sanitation device (MSD; U.S. Coast Guard classification); and
 - clean graywater,^{2*}
 - For a vessel 300 GRT or greater without sufficient tank capacity to hold sewage and/or graywater while within the sanctuary:
 - clean effluent generated incidental to vessel use and generated by an operable Type I or II marine sanitation device (U.S. Coast Guard classification); and
 - clean graywater*;

¹ The order of prohibitions has been modified from the order in the existing regulations.

² Graywater is defined in section 312 of the Clean Water Act as galley, bath, and shower water. Clean means not containing detectable levels of harmful matter.

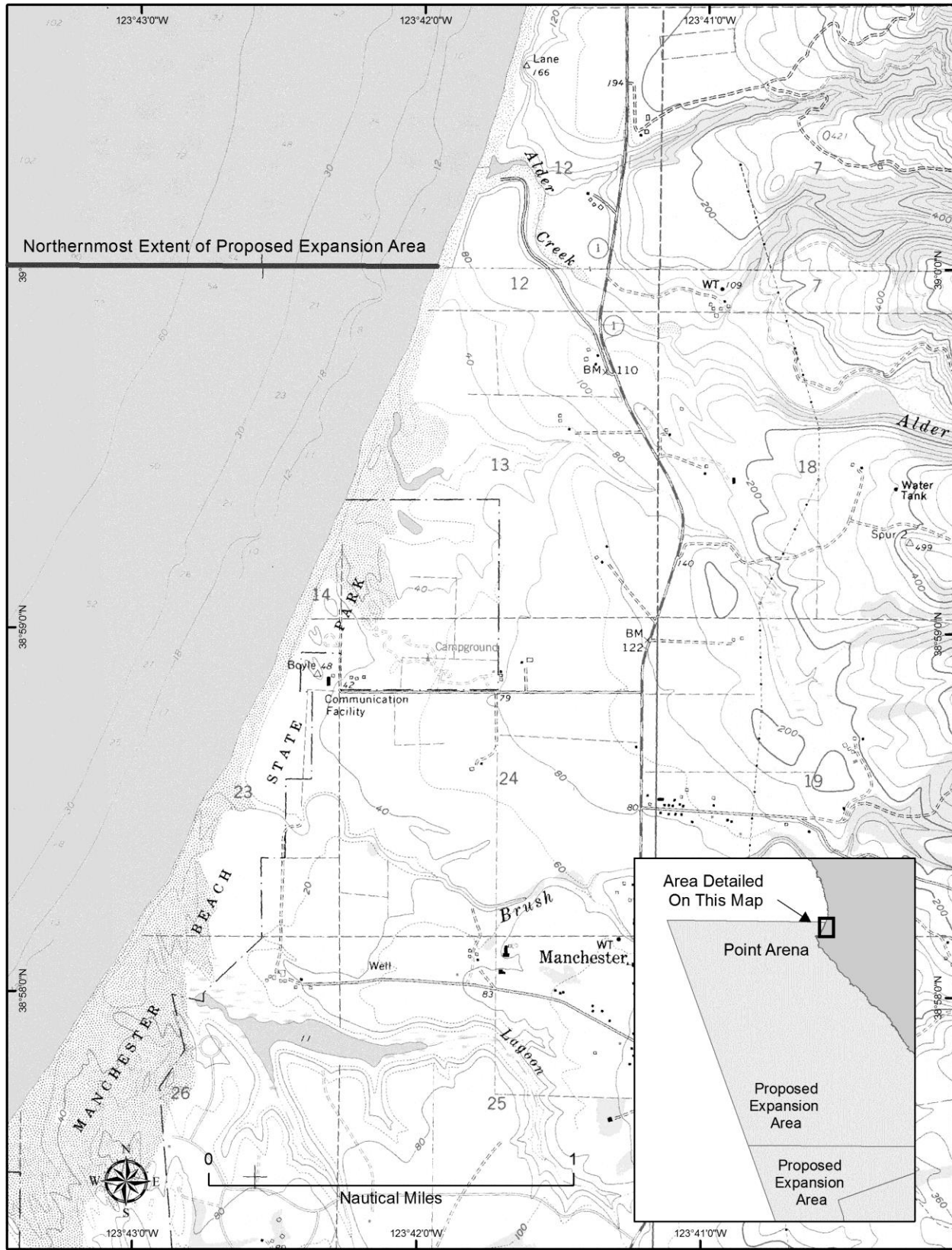


Figure 3.2-1. Northern GFNMS Boundary Detail – Proposed Action

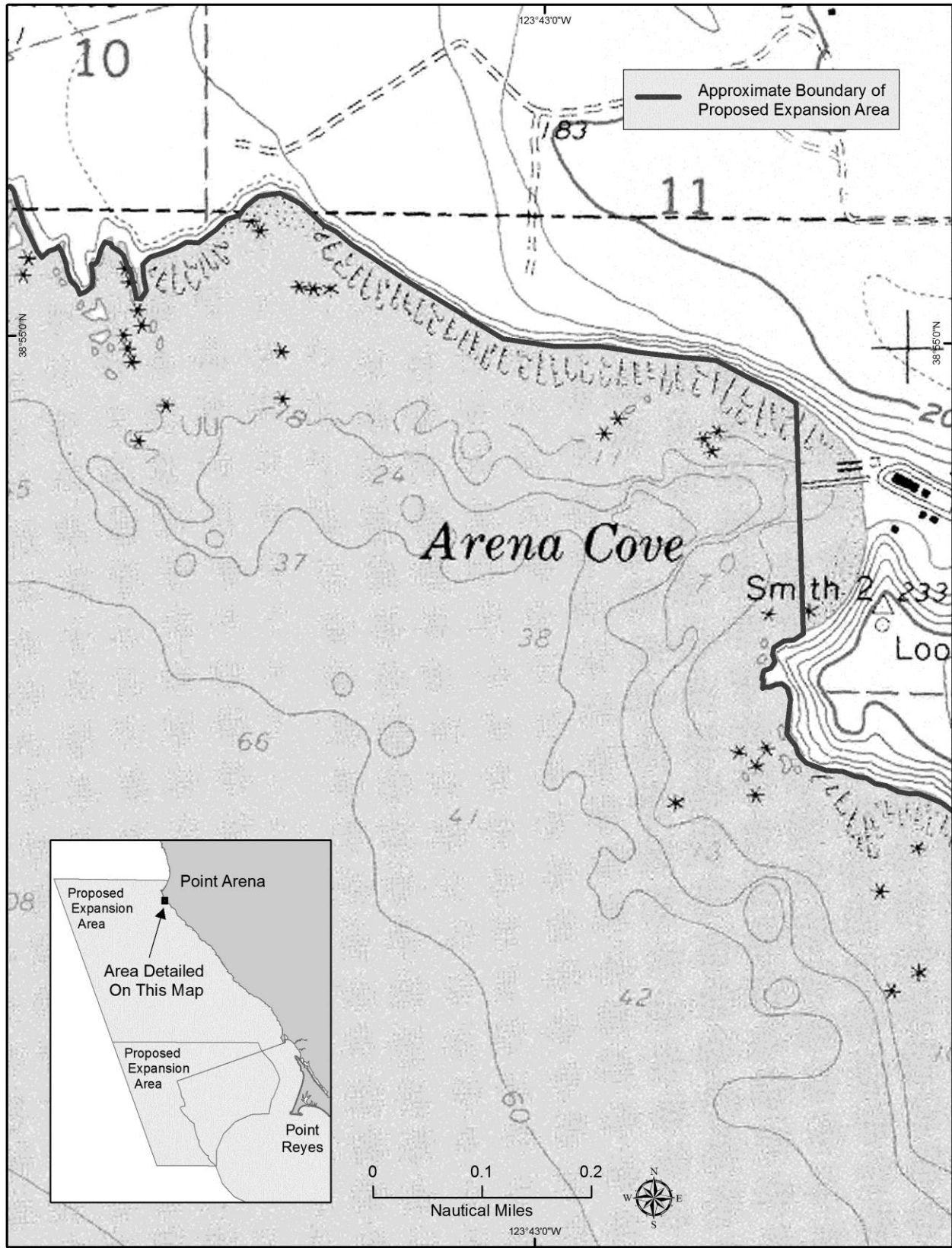


Figure 3.2-2. Arena Cove Harbor Detail – Proposed Action

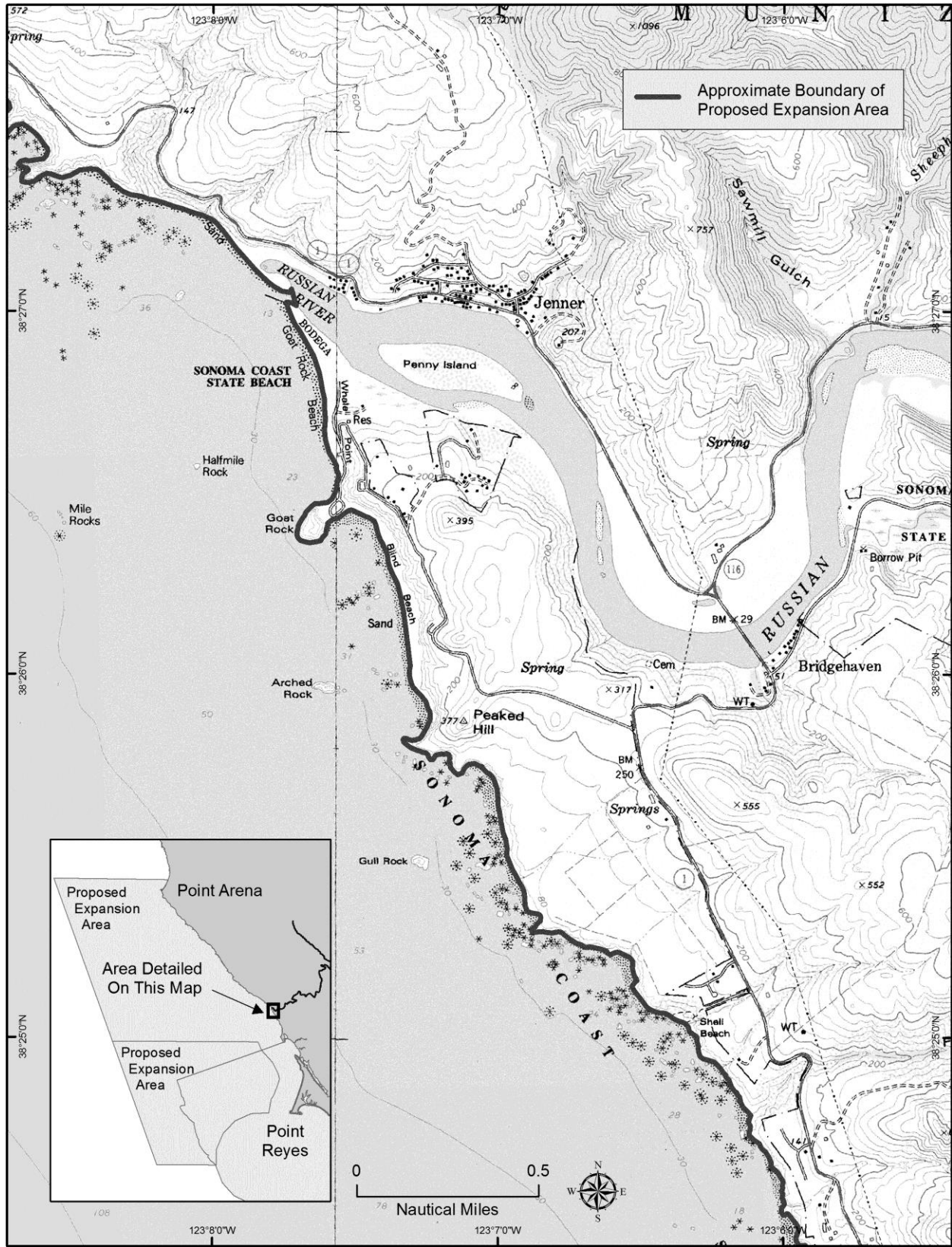


Figure 3.2-3. Russian River Boundary Detail – Proposed Action

- Clean vessel deck wash down, clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, or anchor wash; or
 - Vessel engine or generator exhaust.
- (ii) Discharging from a cruise ship except clean vessel engine cooling water, clean vessel generator cooling water, vessel engine or generator exhaust, clean bilge water, or anchor wash.
 - (iii) Discharging or depositing, from beyond the boundary of the sanctuary, any material that subsequently enters the Sanctuary and injures a sanctuary resource or quality, with the same exceptions as listed above.
- (3) Removing, taking, or injuring benthic invertebrates or algae located on or within the line representing the 50-fathom isobath surrounding Cordell Bank. (This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States)).
 - (4) (i) Drilling into, dredging, or otherwise altering the submerged lands within the line representing the 50-fathom isobath surrounding Cordell Bank; or constructing, placing, or abandoning any structure or material on or in the submerged lands. (This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States)).
 - (ii) Beyond the line representing the 50-fathom isobath surrounding Cordell Bank, drilling into, dredging, or otherwise altering the submerged lands; or constructing, placing, or abandoning any structure or material on the submerged lands except for anchoring any vessel or lawful use of any fishing gear.
 - (5) Taking any marine mammal, sea turtle, or bird, except as authorized by existing regulations.
 - (6) Possessing within the sanctuary any marine mammal, sea turtle or bird taken, except as authorized by existing regulations or as necessary for law enforcement purposes.
 - (7) Possessing, moving, removing, or injuring a sanctuary historical resource.*
 - (8) Introducing or otherwise releasing an introduced species, except striped bass (*Morone saxatilis*) released during catch and release fishing activity.
 - (9) Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of regulations.*

Exceptions and Authorizations

There are proposed exceptions to the above prohibitions, as well as a proposed authorization authority to allow certain activities:

- Exceptions for Emergencies – The above prohibitions do not apply to activities necessary to respond to an emergency threatening life, property or the environment, or as may be permitted by the Sanctuary Superintendent, with authority delegated by the ONMS Director, in accordance with criteria outlined in

15 CFR § 922.48 (National Marine Sanctuary permits-application procedures and issuance criteria) and specifically allowed within the CBNMS permit procedures and criteria 15 CFR § 922.113 (see below).

- Department of Defense – All activities carried out by the Department of Defense (DOD) on the effective date of expansion that are necessary for national defense are exempt from the above prohibitions; other such activities will be exempted after consultation between the Department of Commerce and the DOD. DOD activities not necessary for national defense, such as routine exercises and vessel operations, are subject to all prohibitions contained in the regulations in this subpart.
- Authorizations* – Activities prohibited in (2), (3), (4)(ii), (5), (6) and (7) above may be allowed if:
 - They are authorized by a lease, permit, license, approval, or other authorization issued,³ by another agency;
 - The Sanctuary Superintendent approves the activity; and
 - The applicant complies with any terms and conditions necessary to protect Sanctuary resources and qualities.
- Under no circumstances would oil, gas or mineral exploration, development or production be allowed under an authorization.
- Where necessary to prevent immediate, serious, and irreversible damage to a Sanctuary resource, any activity may be regulated on an emergency basis for up to 120 days.

Permits

The proposed regulations would extend permit procedures and criteria for issuing permits currently established in the sanctuary to the expansion area. The proposed regulations and permit procedures and criteria for issuing permits are summarized as follows:

- A permit may be issued for activities prohibited above in items (2) through (7), subject to terms and conditions, as deemed appropriate. In addition, the activity must meet one of the following findings:
 - Further research or monitoring related to Sanctuary resources and qualities;
 - Further the educational value the Sanctuary;
 - Further salvage or recovery operations in or near the Sanctuary; or
 - Assist in managing the Sanctuary.
- In deciding whether to issue a permit, the Superintendent must consider such factors as:
 - The applicant is qualified to conduct the proposed activity;
 - The applicant has adequate financial resources available to conduct and complete the proposed activity;

³ As a consequence of adding authorization to CBNMS and GFNMS, ONMS regulations will be amended to allow authorizations for these two sanctuaries. This amendment will be included in the proposed rule. Issuance of an authorization would undergo a separate NEPA analysis on a case-by-case basis.



- The methods and procedures proposed by the applicant are appropriate to achieve the goals of the proposed activity;
 - The proposed activity will be conducted in a manner compatible with the primary objective of protection of Sanctuary resources and qualities;
 - The proposed activity will be conducted in a manner compatible with the value of the Sanctuary, considering the extent to which the conduct of the activity may result in conflicts between different users of the Sanctuary, and the duration of such effects;
 - It is necessary to conduct the proposed activity within the Sanctuary;
 - The reasonably expected end value of the proposed activity to the furtherance of Sanctuary goals and purposes outweighs any potential adverse effects on Sanctuary resources and qualities from the conduct of the activity; and
 - Any other factors as the Superintendent deems appropriate.
- In no event may a permit be issued to allow oil, gas or mineral exploration, development or production.*

Summary of CBNMS Modifications Relative to Current Regulations

The proposed regulations summarized above include the following new or modified provisions which would apply to both the existing sanctuary boundaries and the expansion area, under the proposed action:

- ***Enforcement*** – A new prohibition would make the following activities illegal: interfering with, obstructing, delaying, or preventing an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Act or any regulation or permit issued under the Act. This measure would aid in enforcement actions.
- ***Graywater Discharges*** – A new exception would allow some vessels to discharge clean graywater within the sanctuary. Since the sanctuary would be expanded and the adjacent GFNMS would be expanded, the larger area may make it difficult for some vessels to hold graywater discharges while transiting through the sanctuaries. By allowing this discharge, non-cruise ship vessels would not be forced to hold all graywater and would have the option of discharging clean graywater in the sanctuary, consistent with the existing provisions in MBNMS and state and federal regulations. Since many vessels enter and exit the San Francisco Bay, this exception would avoid the potential situation of concentrating graywater discharges in a small area outside of the sanctuaries near the bay entrance.
- ***Historical resources*** – A new prohibition would make the following activities illegal: possessing, moving, removing, or injuring, or attempting to possess, move, remove or injure a Sanctuary historical resource. Since the sanctuary would be considerably larger in size, there may be submerged resources requiring protection.
- ***Permits*** – Permit procedures would be modified to clarify that the regulations prohibit in all cases the issuance of National Marine Sanctuary permits for oil, gas and mineral exploration, development, or production.
- ***Authorization of a Permit, Lease from Another Agency*** – A provision would be included to allow approval or “authorization” of specified activities under limited conditions. This authorization provision

is similar to that in the existing regulations for MBNMS and five other national marine sanctuaries. This process would allow the Sanctuary Superintendent, with authority delegated from the ONMS Director, to approve or authorize some but not all otherwise prohibited activities permitted or licensed by any federal, State, or local authority of competent jurisdiction in certain instances. The Sanctuary Superintendent may also deny an authorization or condition an approval to protect sanctuary resources. Current CBNMS permit regulations do not allow the authorization of any prohibited activity other than through a different mechanism, the issuance of a general permit, to (1) further research or monitoring related to sanctuary resources and qualities; (2) further the educational value of the sanctuary; (3) further salvage or recovery operations; or (4) assist in managing the sanctuary. This change could have implications for the existing sanctuary, as well as the proposed expansion area. Activities including the discharge, construction, drilling, dredging or other disturbance on submerged land outside of the line representing the 50-fathom isobath around Cordell Bank, taking and possessing a marine mammal, sea turtle, or bird, and possessing historical resources which are currently prohibited in the existing sanctuary may be authorized under this new proposed provision.

The authorization process would establish a mechanism for the sanctuary to potentially allow new activities within the existing sanctuary and the proposed expansion area if they were to be approved by another authorizing entity, such as cables, establishing new dredge disposal sites, or construction of pipelines. However, authorization of any such uses would be subject to terms and conditions deemed necessary to protect sanctuary resources and qualities.

GFNMS

For the proposed action, GFNMS would include similar new provisions listed above for CBNMS, as well as additional modified prohibitions. These regulations would be applied to the entire sanctuary, both existing and expanded boundaries. New or substantially modified regulations are noted with an asterisk (*).


Prohibited Activities

Several of the proposed prohibitions are the same as CBNMS prohibited activities, as noted in the following summary. The following activities would be prohibited within the Sanctuary (15 CFR 922.82, Prohibited or otherwise regulated activities):

- (1) Oil, gas or mineral exploration, development or production – same as CBNMS.
- (2) Discharges – same prohibition and exceptions as CBNMS.
- (3) Discharges from cruise ships – same prohibition and exceptions as CBNMS.
- (4) Discharges from beyond the boundary of the Sanctuary that subsequently enter the Sanctuary and injure a Sanctuary resource or quality – same prohibition and exceptions as CBNMS.
- (5) Constructing any structure other than a navigation aid on or in the submerged lands of the Sanctuary; placing or abandoning any structure on or in the submerged lands of the Sanctuary; or drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary in any way, except:

- By anchoring vessels;
 - While conducting lawful fishing activities;
 - Routine maintenance and construction of docks and piers on Tomales Bay; or
 - Mariculture activities conducted pursuant to a valid lease, permit, license or other authorization issued by the State of California.
- (6) Operating motorized personal watercraft (MPWC), except:
- For emergency search and rescue missions or law enforcement operations (other than routine training activities) carried out by the National Park Service, U.S. Coast Guard, Fire or Police Departments or other Federal, State or local jurisdictions; or
 - For a MPWC equipped with a GPS unit within the four designated zones within the expansion area of the sanctuary.*
- (7) Taking any marine mammal, sea turtle, or bird within or above the Sanctuary – same as CBNMS.
- (8) Possessing within the sanctuary any marine mammal, sea turtle, or bird taken – same as CBNMS.
- (9) Possessing, moving, removing, or injuring a sanctuary historical resource – same as CBNMS.
- (10) Introducing or otherwise releasing from within or into the Sanctuary an introduced species, except:
- (i) Striped bass (*Morone saxatilis*) released during catch and release fishing activity – same as CBNMS; or
 - (ii) Species cultivated by mariculture activities in Tomales Bay pursuant to a valid lease, permit, license or other authorization issued by the State of California and in effect on the effective date of the final regulation.
- (11) Disturbing marine mammals or seabirds by flying motorized aircraft at less than 1000 feet over the waters within the seven designated Special Wildlife Protection Zones (SWPZs) except to transport persons or supplies to or from the Farallon Islands or for enforcement purposes. Failure to maintain a minimum altitude of 1000 feet above ground level over such waters is presumed to disturb marine mammals or seabirds.^{4*}
- (12) Operating any cargo vessel engaged within an area extending one nm from a designated SWPZ. This includes but is not limited to tankers and other bulk carriers and barges, or any vessel engaged in the trade of servicing offshore installations, except to transport persons or supplies to or from the Islands or mainland areas adjacent to Sanctuary waters.*
- (13) Attracting a white shark in the Sanctuary; or approaching within 50 meters of any white shark within one nm of, and inside, the newly designated SWPZs around Southeast and North Farallon Islands.

⁴ This presumption of disturbance could be overcome by contrary evidence that disturbance did not, in fact, occur (e.g., evidence that no marine mammals or seabirds were present in the area at the time of the low overflight). In February 2012 a Final Rule standardized NOAA regulations across the sanctuaries to reflect a consistent and clear regulatory approach (NOAA, Federal Register (Vol. 77, No.17; January 26, 2012).

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- (14) Deserting a vessel aground, at anchor, or adrift in the Sanctuary.
- (15) Leaving harmful matter aboard a grounded or deserted vessel in the Sanctuary.
- (16) Anchoring a vessel in a designated seagrass protection zone in Tomales Bay, except as necessary for mariculture operations conducted pursuant to a valid lease, permit or license.
- (17) Interfering with enforcement action* – same as CBNMS.

Exceptions and Authorizations

There are proposed exceptions to the above prohibitions, as well as a proposed authorization procedure to allow certain activities:

- **Exceptions for Emergencies** – The above prohibitions do not apply to activities necessary to respond to an emergency threatening life, property or the environment, or as may be permitted by the Sanctuary Superintendent, with authority delegated by the ONMS Director, in accordance with criteria outlined in 15 CFR § 922.48 (National Marine Sanctuary permits – application procedures and issuance criteria) and specifically allowed within the GFNMS permit procedures and criteria (see below) – same as CBNMS.
- **Department of Defense** – All activities currently carried out by the Department of Defense are considered essential for national defense and not subject to the prohibitions listed above. Any additional activities would be exempted only after consultation with the Sanctuary Superintendent and the Department of Defense.
- **Authorizations** – Prohibited activities listed above in (2) through (9), may be allowed if they are authorized by a lease, permit, license, approval, or other authorization issued by another agency.* Introduction of an introduced species from shellfish mariculture determined to be non-invasive in state waters may also be allowed in GFNMS under this authorization process.⁵ The same findings as described above for CBNMS authorizations would be applicable to GFNMS authorizations. In no event may the Director issue an authorization or otherwise approve oil, gas or mineral exploration, development or production within the Sanctuary.

Permits

The proposed regulations would extend permit procedures and criteria for issuing permits currently established in the sanctuary to the expansion area. The proposed GFNMS regulations would provide a permit process for otherwise prohibited activities (2) through (9) and (11) through (16). The criteria for issuing permits are the same as the proposed CBNMS permit provisions, including all findings listed above for CBNMS. In addition, the following clause proposed in CBNMS regulations would be included in GFNMS regulations:

- In no event may the Director issue a National Marine Sanctuary permit or otherwise approve oil, gas or mineral exploration, development or production within the Sanctuary.*

⁵ A separate rulemaking is proposing to establish limited authority for GFNMS to authorize the introduction of introduced species from shellfish mariculture determined to be non-invasive, so this proposed regulation is the same as the introduced species rulemaking that will be in effect before the proposed expansion is finalized.

Summary of GFNMS Regulation Modifications

The proposed regulations for GFNMS listed above reflect the following modifications to existing sanctuary provisions and the reasoning behind the proposed changes:

- Delete the pipeline exemption from oil and gas and seabed disturbance prohibitions – Both of these existing prohibitions include an exception for pipelines in limited circumstances. The present regulatory language regarding oil and gas pipelines created confusion as to whether or not they were allowed with a permit (the oil and gas prohibition) or specifically exempted (the seabed disturbance prohibition). These exceptions are not included in either the oil and gas or seabed disturbance prohibitions in the proposed action. There are no existing or proposed oil or gas pipelines in the vicinity and no planned or reasonably foreseeable oil or gas development projects or leases that would necessitate pipelines in these sanctuaries. Oil and gas exploration and development would be prohibited throughout the sanctuaries. Should an oil or gas pipeline be proposed in the future, the new authorization process (described below) may be used to allow such a use. Therefore, the change in regulations regarding oil and gas pipelines is more of a technical clarification. However, should an authorization be used to allow an oil or gas pipeline, it would not necessarily be subject to the existing limitations that require that it be placed at a distance greater than 2 nm from the Farallon Islands, Bolinas Lagoon and Areas of Special Biological Significance (ASBS).
- Prohibit mineral extraction – NOAA is proposing to amend the regulation to also prohibit exploring for, developing, or producing minerals within the current boundary and expansion area of GFNMS to be consistent with CBNMS and Monterey Bay National Marine Sanctuary, which are both adjacent to and abutting GFNMS. No commercial exploration, development, or production of minerals is currently conducted, nor is such activity anticipated in the near future.
- Designate Special Wildlife Protection Zones (SWPZs) to use for regulatory protections (cargo vessels and overflight restrictions) instead of using ASBS and other specified locations – NOAA is proposing to rename the areas of overflight regulation Special Wildlife Protection Zones, make small changes to extend the areas of overflight regulation within the current existing boundaries of GFNMS overflight regulation and add two discrete areas with overflight restrictions in to the proposed expansion area. The new Special Wildlife Protection Zones would implement restrictions to disturbing marine mammals or seabirds by flying a motorized aircraft as well as to the sailing of cargo vessels. SWPZs would be established in areas of high biological diversity and/or abundance of species including federally listed and specially protected species such as seabird “hotspots” with important populations, species diversity, and high concentration of nesting birds and pinniped “hotspots” such as critical habitat and pupping areas. SWPZs would be established where such “hotspots” are susceptible to disturbance and need protection from certain activities that could harm these sensitive resources.

The existing GFNMS regulations use a combination of specified locations and State ASBS to protect sensitive seabird and pinniped areas from cargo vessel disturbance or discharge, and from low flying aircraft disturbance. ASBS are those areas designated by California's State Water Resources Control Board as requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. ASBS are a subset of State Water Quality

Protection Areas established pursuant to California Public Resources Code section 36700 et seq. These areas were designated based on the presence of certain species or biological communities that, because of their value or fragility, deserve special protection by preserving and maintaining natural water quality conditions to the extent practicable.

The State could change the location or size of ASBS, subsequently changing the location of sanctuary cargo vessel and low overflight prohibitions linked to the ASBS. Within the existing GFNMS boundaries, ASBS coincide with areas of high biological diversity and/or abundance of species, but the existing ASBS in the expansion area (Saunders Reef, Del Mar Landing, Gerstle Cove and Bodega) do not coincide with the seabird and pinniped hotspots and are not in locations that could provide adequate protections to these wildlife as a result of sanctuary cargo vessel or low flying aircraft prohibitions. Therefore, SWPZs are proposed to better reflect resource areas needing protection from certain human activities and to provide consistency between the existing and proposed boundary areas.

In the existing sanctuary boundaries, the proposed SWPZs would remain similar in size and location to the areas currently protected from cargo vessels and low flying aircraft. The changes within the existing sanctuary boundaries are considered minor modifications. The shape of the protected areas would change from circles to polygons and would be delineated around known points, islands and landmarks, instead of following ASBS boundaries or specific named locations (e.g., Bolinas Lagoon). Whereas the ASBS and specified location boundaries are rounded, the SWPZ boundaries would be straight lines along specified longitudes and latitudes to allow for easier navigation. The middle island of the Farallones, which is currently included in the protected area around the Farallones, has not been included in a SWPZ because there are no wildlife resources on it. Even though new SWPZs would be established under sanctuary regulations, the State-designated ASBS would remain in place and continue to function as established under State law. The references to ASBS would be removed from the GFNMS regulations, and a new definition to describe SWPZs would be added to the GFNMS regulations. There would be a total of five SWPZs in the current sanctuary boundaries, which would be subject to protection from cargo vessel traffic and low overflights pursuant to prohibitions in the proposed regulations. These zones include: Tomales Point, Point Reyes, Duxbury Reef-Bolinas Lagoon, and two zones at the Farallon Islands (shown in Figures 3.2-4, 3.2-5, 3.2-6 and 3.2-7), described as follows:

- SWPZ 3 would encompass the area within the sanctuary surrounding Tomales Point and the northern portion of Tomales Bay to the east shore at Toms Point, and north to Estero de San Antonio. The proposed change would increase the area by approximately 5 sq miles to a total area of 9.3 sq miles (7 sq nm). However, it would only increase the time an aircraft would have to stay above 1,000 feet by approximately 35 seconds if traveling at a speed of 120 miles per hour, assuming the flight line is roughly parallel to the coast.
- SWPZ 4 would encompass the area within the sanctuary surrounding Point Reyes. This change in shape would increase the area by approximately 1.8 sq miles to a total size of 13.5 sq miles (10.2 sq nm), but it would not increase the time an aircraft would have to stay above 1,000 feet if traveling at a speed of 120 miles per hour.

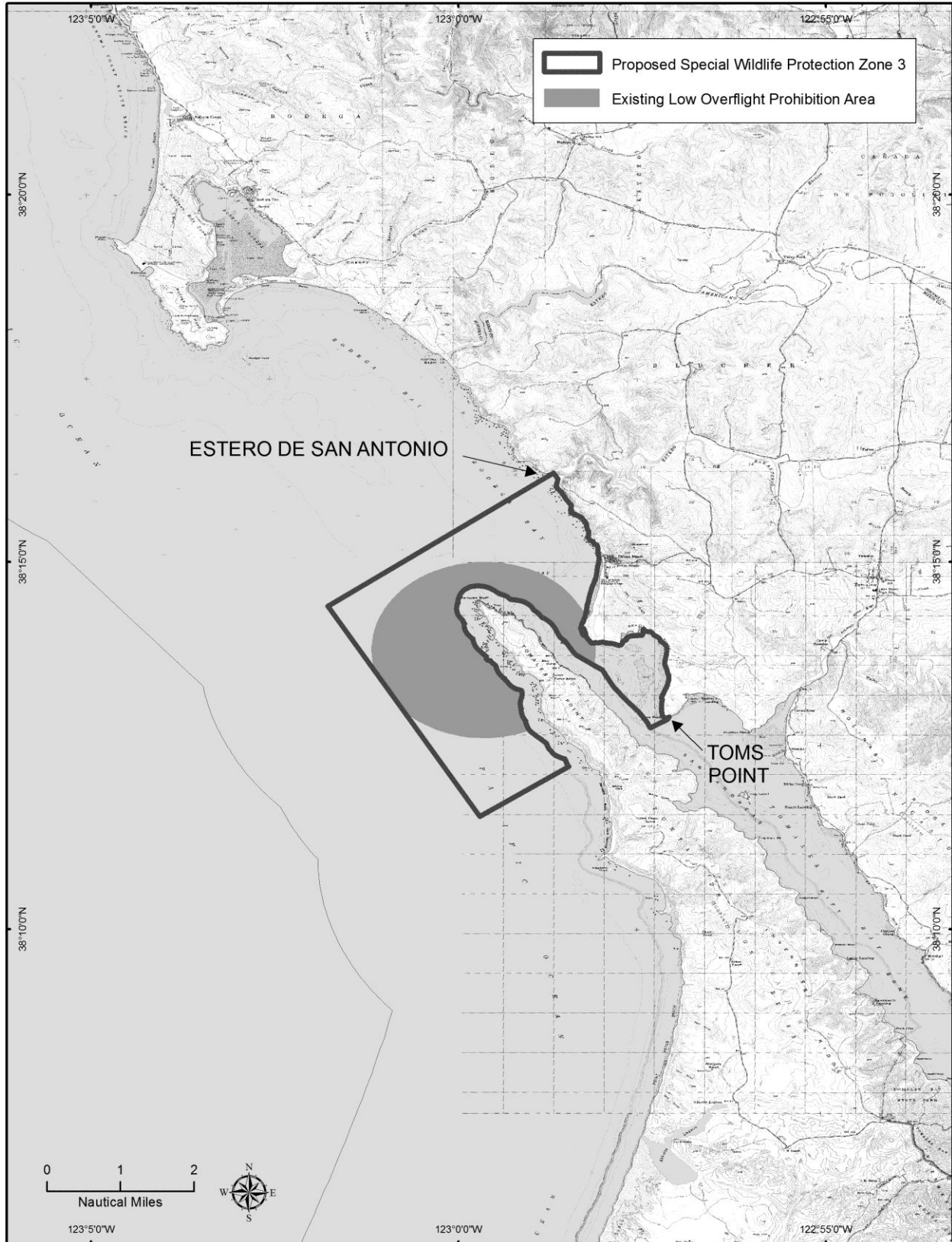


Figure 3.2-4. Proposed Special Wildlife Protection Zone 3 – Tomales Point

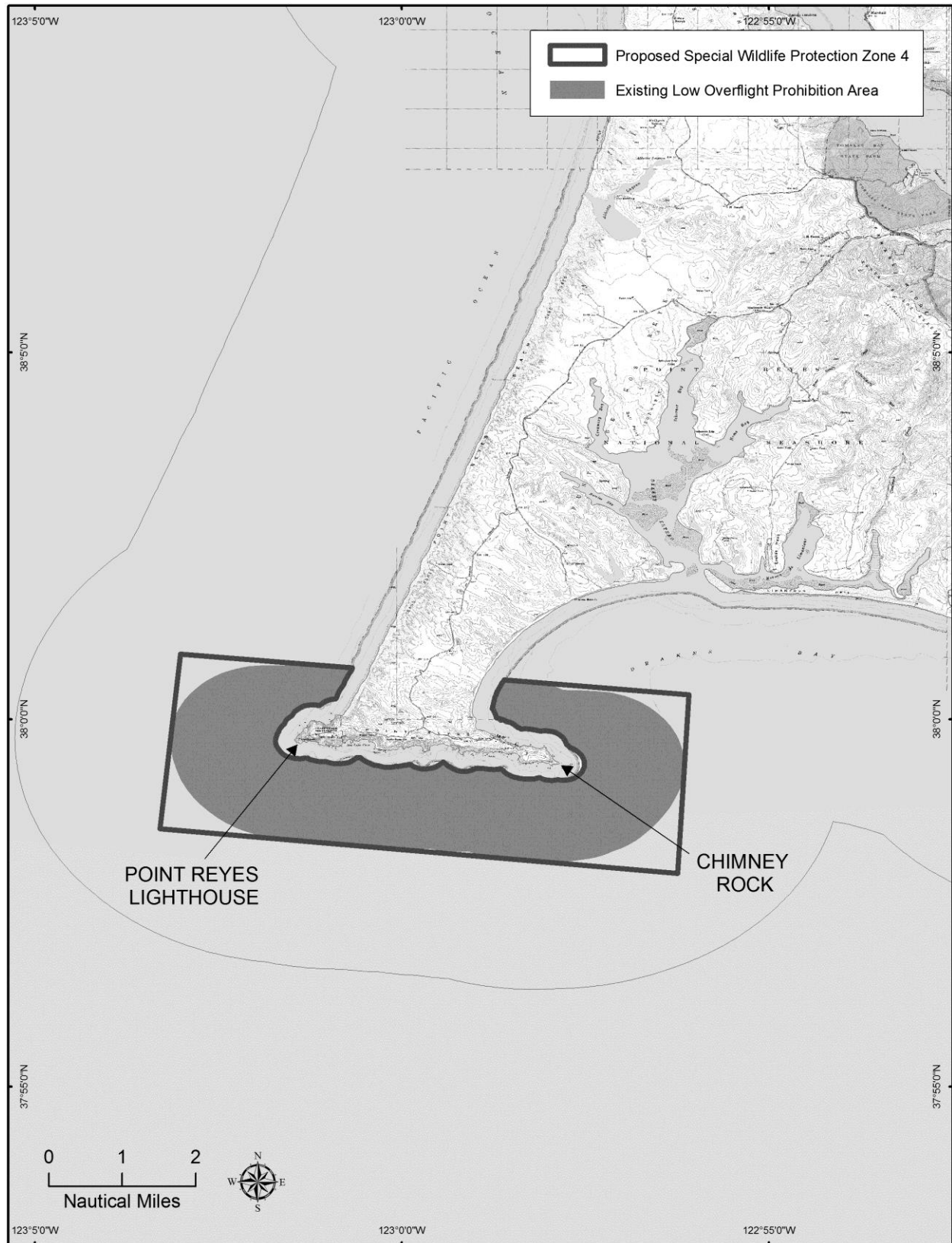


Figure 3.2-5. Proposed Special Wildlife Protection Zone 4 – Point Reyes

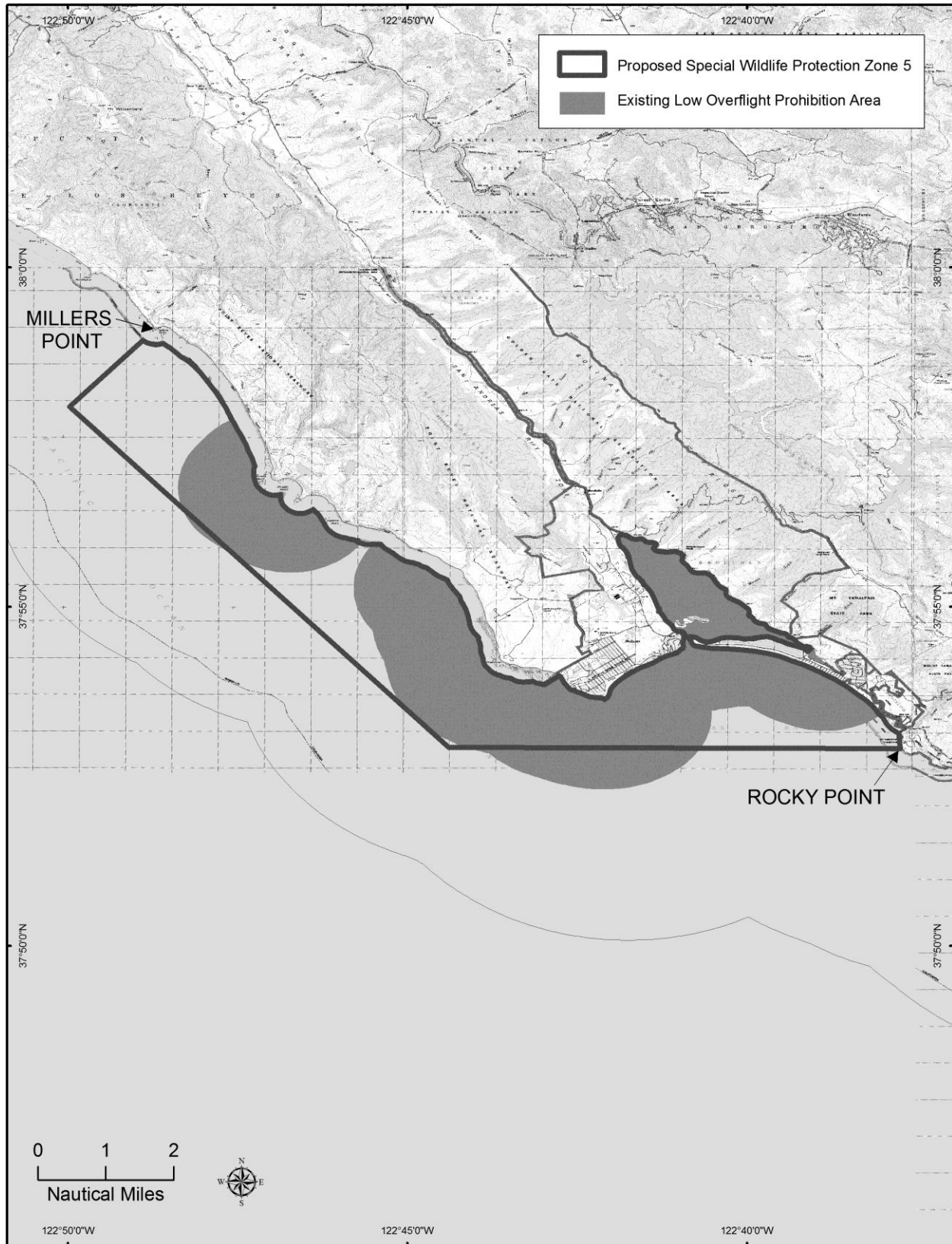


Figure 3.2-6. Proposed Special Wildlife Protection Zone 5 – Duxbury Reef– Bolinas Lagoon



Figure 3.2-7. Proposed Special Wildlife Protection Zones 6 and 7 – Farallon Islands

- SWPZ 5 would encompass all of Bolinas Lagoon, but not Seadrift Lagoon, and extend west to Bolinas Bay, south to Rocky Point and north to Millers Point. The proposed change would increase the area by approximately 4.5 sq miles to a total size of 19.6 sq miles (14.8 sq nm) and increase the time an aircraft would have to stay above 1,000 feet by approximately 20 seconds if traveling at a speed of 120 miles per hour.
- SWPZ 6 would extend approximately one nm seaward of Southeast Farallon Island and Maintop Island. The proposed change would decrease the area by approximately 2.2 sq miles to a total size of 9 sq miles (6.8 sq nm) and decrease the time an aircraft would have to stay above 1,000 feet by approximately 60 seconds if traveling at a speed of 120 miles per hour.
- SWPZ 7 would extend approximately one nm seaward of North Farallon Island and Isle of St. James. The proposed change would increase the area by approximately 1.4 sq miles to a total size of 7.9 sq miles (6 sq nm), but would not increase the time an aircraft would have to stay above 1,000 feet if traveling at a speed of 120 miles per hour.
- Create two SWPZs in the proposed expansion area (see Figure 3.2-8 and 3.2-9) near Gualala and Fort Ross – As mentioned above, State designated ASBS in the proposed northern expansion area do not overlap with sensitive seabird and pinniped colonies and do not adequately protect areas of high biological diversity and/or abundance of species. Therefore, the four existing ASBS within the proposed expansion area were not used as a basis for wildlife protection; instead the proposed action includes two designated SWPZs.
 - SWPZ 1 would encompass an area of approximately 10.5 sq miles (7.9 sq nm), extending from Haven's Neck in Mendocino County ten miles south to Del Mar Point in Sonoma County. The overflight time would be about 200 seconds (3.33 minutes) for an aircraft traveling at 120 miles per hour. SWPZ 1 would include observed pinniped haul-out areas, three species of breeding seabird colonies and one roosting seabird species at Fish Rocks; and observed pinniped haul-out areas and five species of breeding seabirds at Gualala Point Island.
 - SWPZ 2 would encompass an area of approximately 21.4 sq miles (16.2 sq nm) offshore Sonoma County, extending from Windermere Point north of the Russian River approximately 14 miles to Duncans Point. The overflight time would be about 375 seconds (6.25 minutes) for an aircraft traveling at 120 miles per hour. SWPZ 2 would include observed Steller Sea Lion haul out areas at Northwest Cape (Fort Ross); and harbor seal haul out areas and five species of breeding seabirds throughout the entire Russian River Colony Complex, which is a system of offshore rocks north and south of the Russian River.
- Establish prohibitions associated with SWPZs – The following activities would be prohibited in proposed SWPZs in both the existing sanctuary and proposed expansion area:
 - Operating a cargo vessel within an area extending one nm from a SWPZ (see Figure 3.2-10);
 - Flying lower than 1,000 feet above sea level over a SWPZ.

Cargo vessels would be required to sail at least one nm from any SWPZ. Although the proposed regulation would change the buffer in the existing zones from 2 nm to one nm, the proposed new

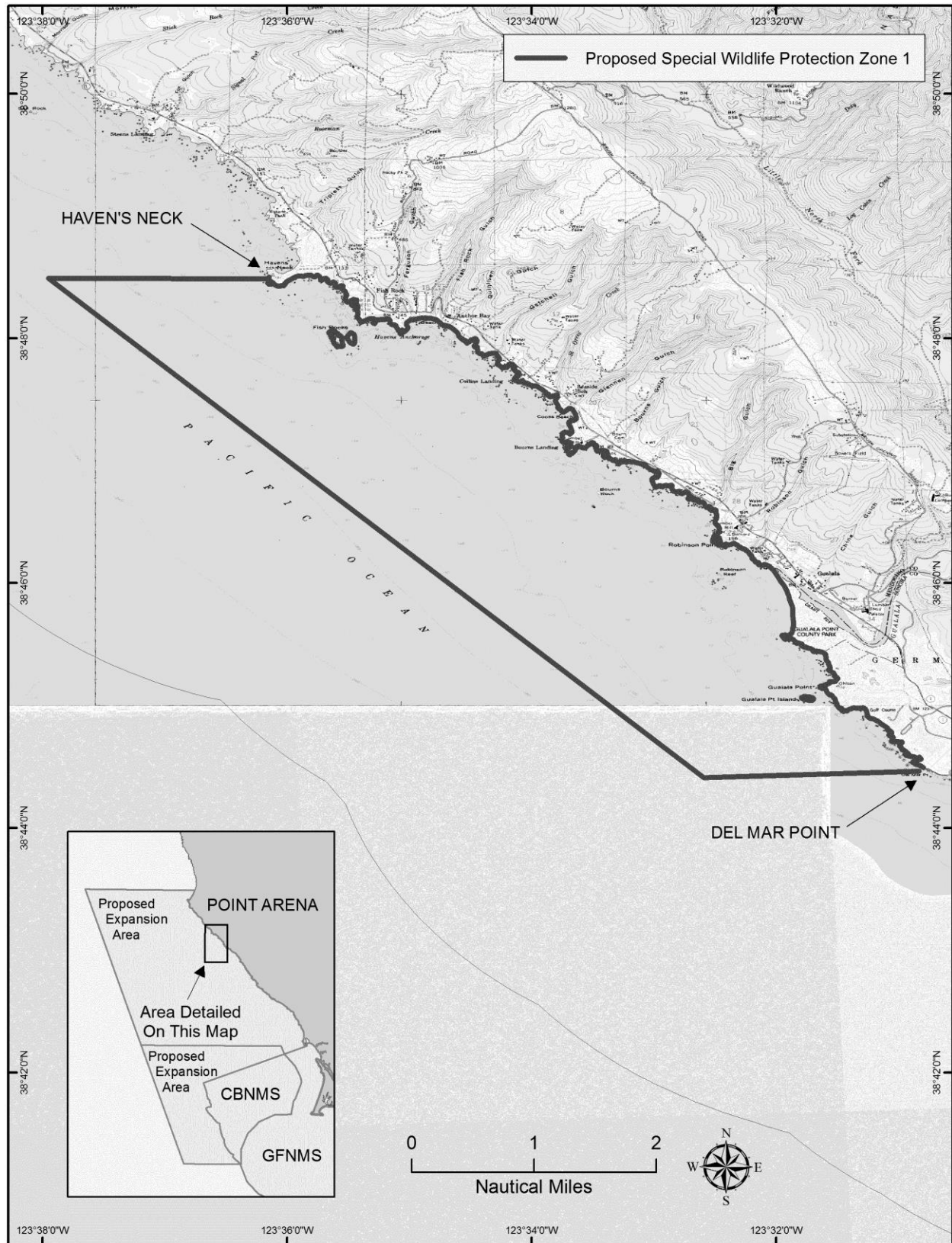


Figure 3.2-8. Proposed Special Wildlife Protection Zone 1 – Point Arena

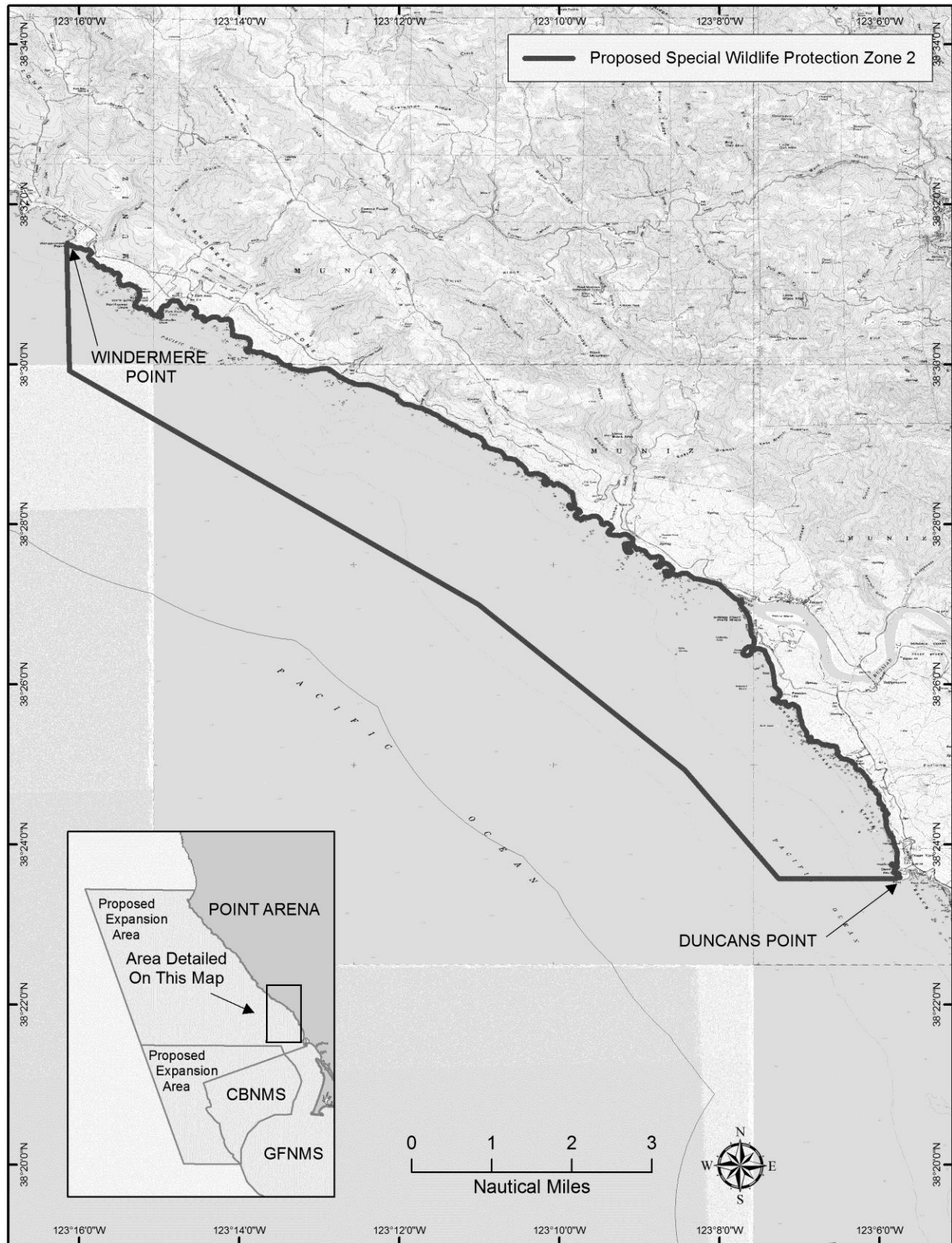


Figure 3.2-9. Proposed Special Wildlife Protection Zone 2 – Fort Ross

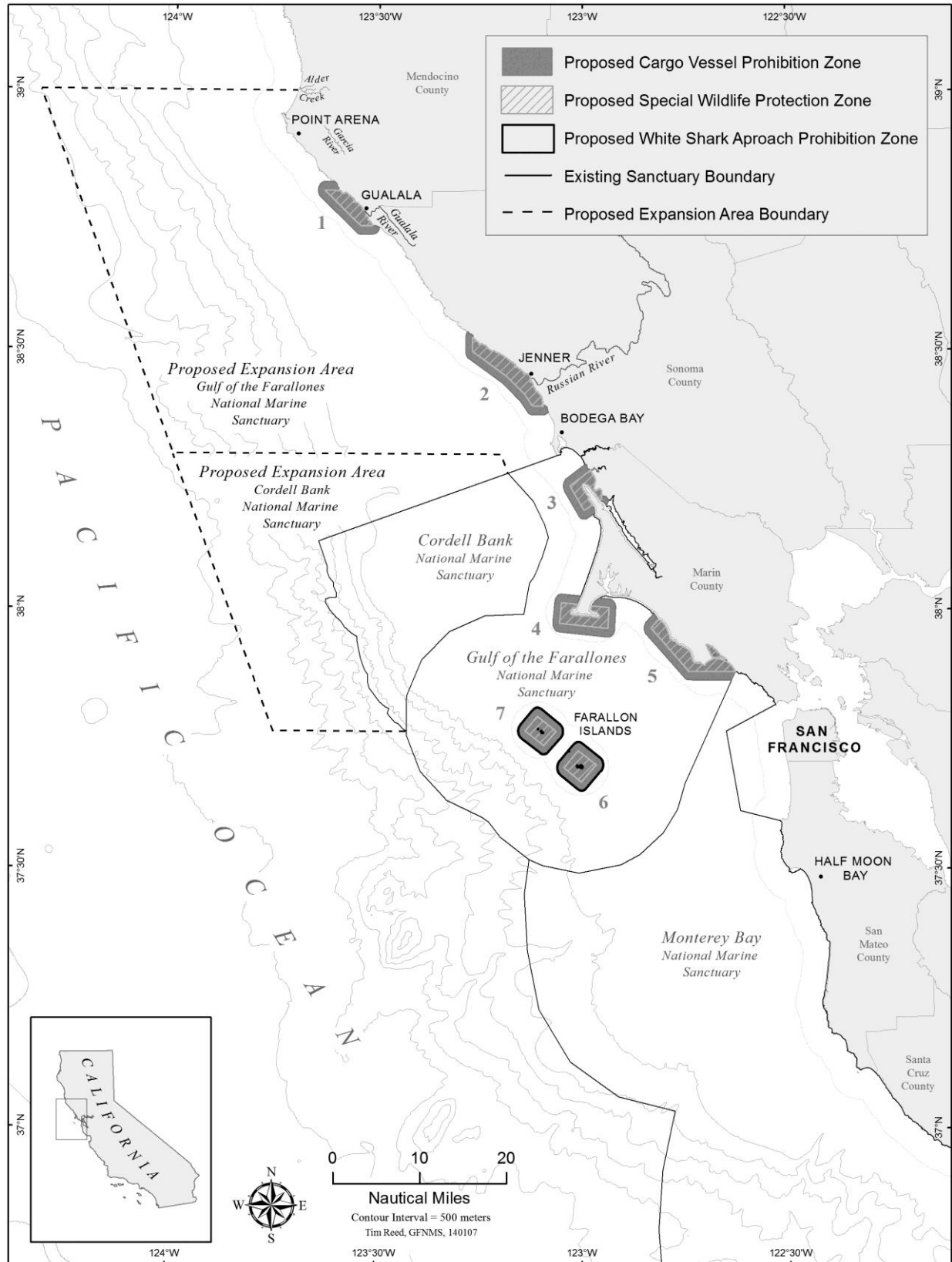


Figure 3.2-10. Proposed Cargo Vessel Prohibition Zones and Proposed White Shark Approach Prohibition Zones

SWPZs would encompass approximately the same areas that were previously identified in the regulations. Therefore, the proposed new cargo vessel prohibition would remain similar in size and location to the areas currently protected from cargo vessels.

- Prohibit approaching white sharks within one nm of the two SWPZs around the Southeast and North Farallon Islands, similar to existing regulations – NOAA is proposing to refine and further delineate the zone prohibiting approaching a white shark within two nautical miles of the Farallon Islands by creating two zones that encompass both the Southeast and North Farallon Islands (see Figure 3.2-10). The existing zone is circular and surrounds all the Farallon Islands. The two new zones would be changed to a polygon and match the cargo vessel prohibition zones by creating a one nautical mile buffer around proposed SWPZs 6 and 7. The location and size of the zones would remain effectively similar to the current prohibition at both the Southeast and North Farallon Islands, however, the area around Middle Farallon Island would be removed resulting in a total area that is smaller than the existing zone. Middle Farallon Island is not considered to be a location of primary food source (i.e., pinnipeds) for white sharks.
- Create three year-round MPWC use zones and one seasonal MPWC zone (see Figure 3.2-11, overview of zones, and Figures 3.2-12, 3.2-13, 3.2-14 and 3.2-15 for individual proposed zones) within the proposed expansion area — MPWC, which are often referred to as “jetskis”® or simply “skis,” include several small vessel designs that share similar performance characteristics.⁶ NOAA has restricted the use of MPWC within various sanctuaries when MPWC operation poses a unique and significant threat of disturbance to sanctuary habitats and wildlife through repetitive operation within sensitive environments. NOAA assessments of MPWC impacts indicate that unrestricted access to all reaches of the sanctuary by such craft are likely to pose a threat to wildlife. Some MPWC operators commonly accelerate and decelerate repeatedly and unpredictably, travel at rapid speeds directly toward shore, and may maneuver close to rocks, while motorboat operators generally transit through areas at steady speeds and bearings and slow down as they approach shore and offshore rocks. Thus wildlife disturbance impacts from MPWC tend to be more likely than those from motorboat use, due to impacts in ecologically sensitive areas, often in nearshore locations.

Potential impacts include physical damage to marine life and shallow habitats and behavioral modification and site abandonment/avoidance by sea birds and marine mammals. Research indicates that impacts associated with MPWC tend to be locally concentrated, producing effects that are more geographically limited yet potentially more severe than from motorboat use, due to repeated disruptions to wildlife and an accumulation of impacts in a shorter period of time (Snow 1989). The smaller size and shallower draft of MPWC means they are more maneuverable and operable closer to shore and in shallower waters than other types of motorized watercraft (U.S. Dept. of Interior 1998). These characteristics greatly increase the potential for MPWC to disturb fragile nearshore habitats and organisms.

⁶ ONMS is currently in the process of modifying the definition of MPWC as part of nationwide rulemaking; the new definition will be incorporated into GFNMS regulations when the new definition is finalized. For more information, refer to the proposed rule describing this ongoing regulatory process at 78 FR 5998.

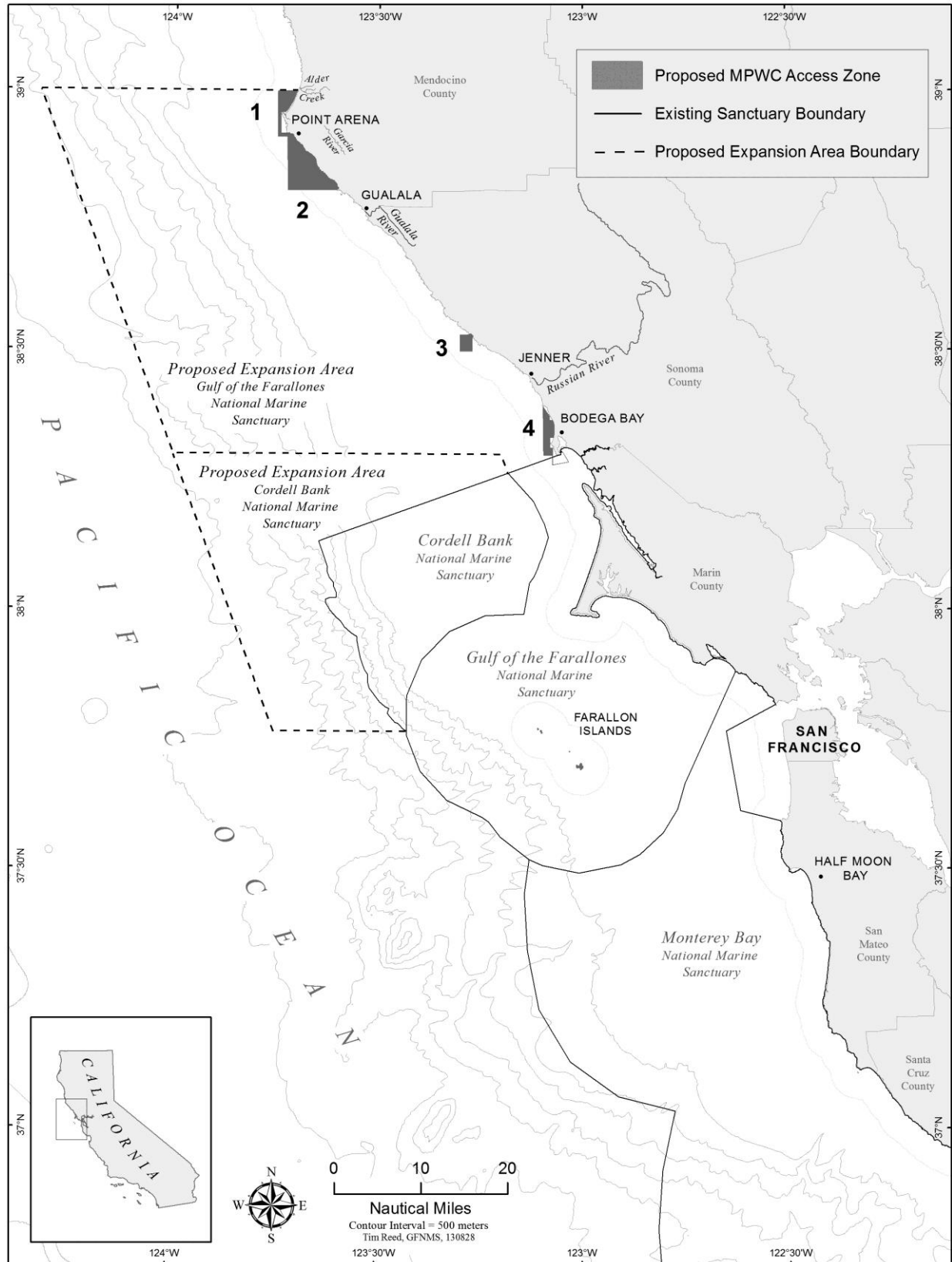


Figure 3.2-11. Proposed MPWC Zones Overview



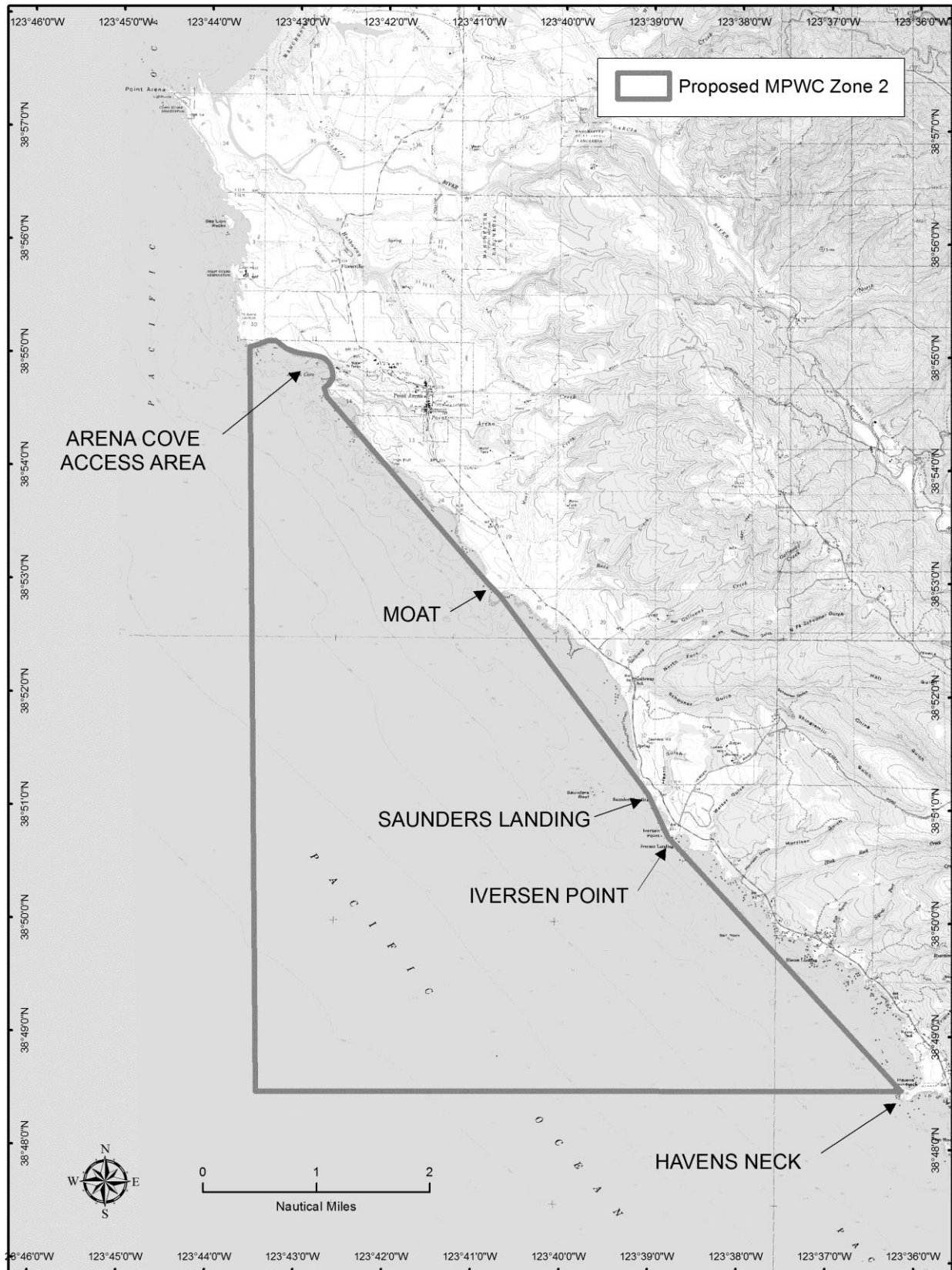


Figure 3.2-13. Proposed MPWC Zone 2

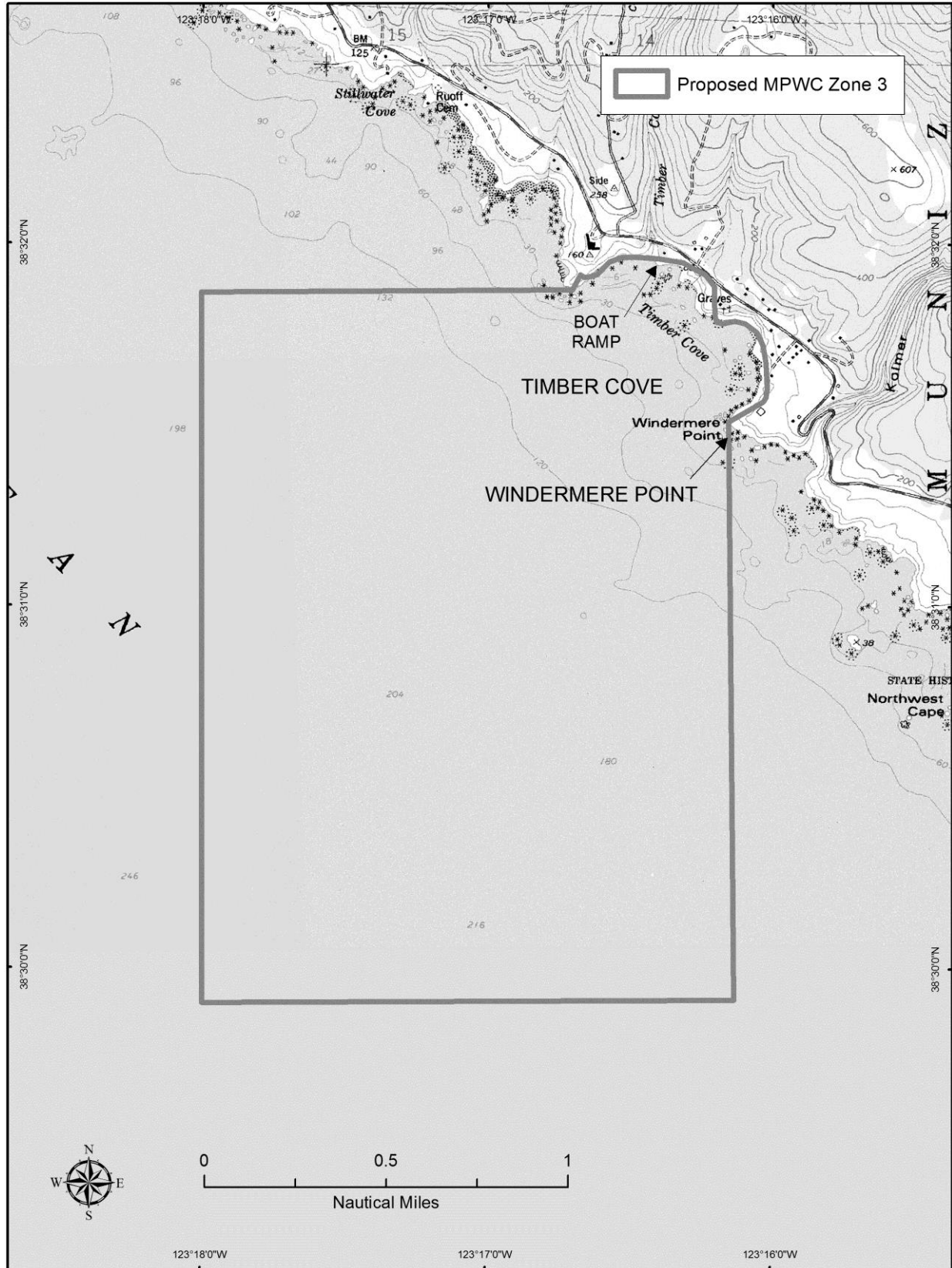


Figure 3.2-14. Proposed MPWC Zone 3

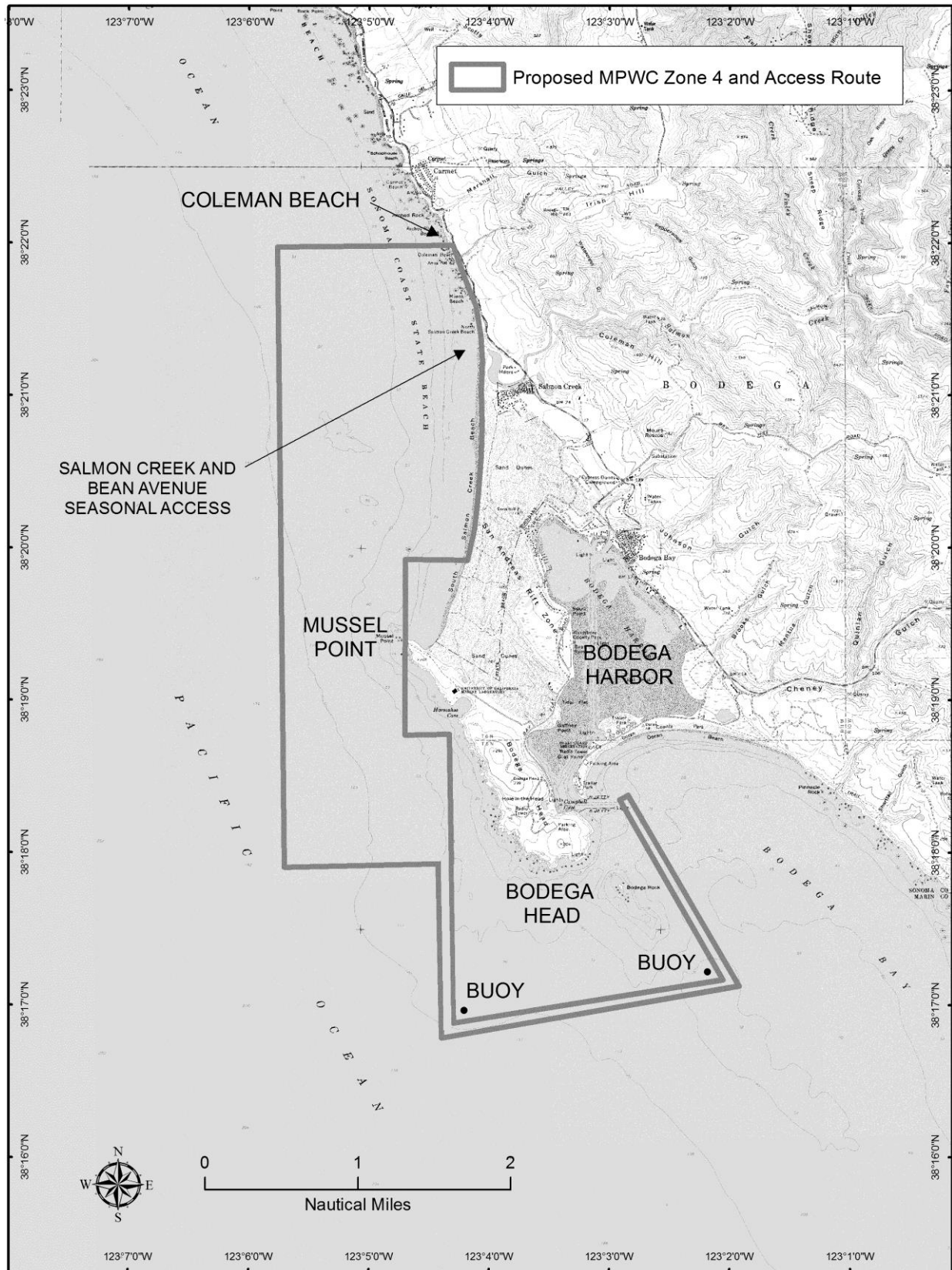


Figure 3.2-15. Proposed MPWC Zone 4

To help protect habitats and sensitive marine life, operation of MPWC would be restricted to four designated zones within the Sanctuary and would limit access to the nearshore. One of the four zones, Zone 1, would be seasonal and would only be accessed from October to February to provide protection to the threatened Snowy Plover off Manchester Beach during their nesting season. The boundaries for each of the proposed MPWC operating zones are described in detail below and shown on Figures 3.2-12 through 3.2-15. MPWC operators would launch at only at the four specified access areas. There would be only one access area in each zone, and each zone would be designed to keep MPWCs offshore to the extent practicable.

The proposed regulations specify that an operable GPS unit in working condition must be carried on all MPWC accessing each zone in order to accurately and precisely navigate to MPWC zones and to ensure that the MPWC stays within the designated zones. Collectively, the four proposed zones encompass 2.2% of the proposed expansion area (33.4 nm²). The establishment of the four designated zones would mean that MPWC would be prohibited outside these zones (except as exempted in the regulation or through a national marine sanctuary permit). Access to the proposed zones by conventional vessels would continue unchanged. The proposed action would prohibit the use of MPWC in 97.8% of the waters of the proposed expansion area, and when combined with the existing GFNMS, would prohibit the use of MPWC in 98.7% of the total sanctuary waters. The sites of the three zones have been specifically proposed to minimize and/or prevent impacts on nearshore wildlife and to protect known seabird and pinniped hotspots, which include areas of high biological diversity and/or abundance of species; and/or federally listed and specially protected species.

Lifeguards and other safety professionals have used MPWC for surf rescue in other areas, such as within MBNMS, with the full support of NOAA. NOAA will continue to support public agency MPWC search and rescue operations throughout the waters of the sanctuary. NOAA would also support MPWC training activities by public safety agencies through a permitting process.

Wildlife distribution and use patterns in the study area differ from GFNMS and MBNMS. Because of the rockier shoreline, lack of estuaries and sandy beaches, and more powerful wave conditions in the study area, wildlife has fewer areas to take refuge on the outer coast. It is critical that the few sites available for breeding seabirds and pinnipeds be protected from disturbance.

The four proposed MPWC zones would avoid the proposed SWPZs and include traditional coastal access points. The proposed zones, based on public comment regarding use areas, would be located as follows:

- Zone 1 (From latitude 39 to Arena Cove) (Area: 8.5 sq miles, 6.4 sq nm) – This seasonal zone would be open from October to February. It would be closed from March to September to limit potential negative interactions with MPWC landing on Manchester beach during the time that Snowy Plovers, listed as threatened by the Endangered Species Act, nest on beach (see Figure 3.2-12).
- Zone 2 (From Arena Cove to Havens Neck) (Area: 26.2 sq miles, 19.8 sq nm) – Because of the orientation of the coastline, compliance with borders in the nearshore using lines of latitude and longitude would be difficult. Prominent visual markers at Arena Cove, Moat, Saunders Landing,

Iverson Landing and Haven's Neck would be used to define the eastern boundary. The proposed zone would require MPWC users to stay seaward of all the listed points at all times. Use of waypoints at each of the shoreside locations would help operators with compliance. The area by this zone has few beaches or places of refuge on the shoreline, and many cliffs and coastal rocks and sea stacks, so MPWC generally operate offshore in this region (see Figure 3.2-13).

- Zone 3 (Timber Cove) (Area: 3.8 sq miles, 2.9 sq nm) – Zone 3 would be accessed through a boat ramp at Timber Cove (see Figure 3.2-14).
- Zone 4 (From Bodega Head to Coleman Beach) (Zone Area: 6.1 sq mi, 4.6 sq nm, including access area) – A 100-yard access route from Bodega Harbor (within the current GFNMS boundary) using the harbor entrance and two navigational buoys would allow entrance to the southern boundary of the zone. Seasonal access would also be available through Salmon Creek, at Bean Avenue and the Ranger's Station (see Figure 3.2-15).
- Remove existing limited pipeline authorization language (referred to as “certification” in 15 CFR 922.84) and replace with a general authorization provision – The existing language allows the Sanctuary to approve a permit, license, or other authorization issued by another agency allowing the laying of any pipeline related to hydrocarbon operations in leases adjacent to the sanctuary and placed at a distance greater than 2 nm from the Farallon Islands, Bolinas Lagoon, and any ASBS as consistent with the purpose of the sanctuary and only if there is no significant effect on sanctuary resources. This provision would be replaced by an authorization provision, similar to the proposed CBNMS authorization provision allowing the Sanctuary Superintendent to approve or authorize some but not all otherwise prohibited activities permitted or licensed by any Federal, State, or local authority of competent jurisdiction in certain instances.

As in CBNMS, current GFNMS permit regulations do not allow the authorization of any prohibited activity other than through the issuance of a national marine sanctuary permit, to (1) further research or monitoring related to Sanctuary resources and qualities; (2) further the educational value of the Sanctuary; (3) further salvage or recovery operations; or (4) assist in managing the sanctuary. The proposed authorizations would potentially allow some activities that are currently prohibited under existing sanctuary regulations so, like in CBNMS, this change would have implications for the existing sanctuary, as well as the proposed expansion area. The proposed list of activities that could be authorized in GFNMS differs slightly from the proposed list of activities in CBNMS. Activities including the discharge, construction, drilling, dredging or other disturbance on submerged land, operating motorized personal watercraft, taking and possessing a marine mammal, sea turtle, or bird, and possessing historical resources, which are currently prohibited in the existing sanctuary may be authorized under this new proposed provision. Furthermore, consistent with the recent rulemaking regarding introduced species, shellfish mariculture using non-invasive introduced species could be authorized throughout State waters in the sanctuary.

The authorization process would establish a mechanism for allowing new activities within the existing sanctuary and the proposed expansion area if they were approved by another authorizing entity, such as alternative energy projects, sewage outfalls, laying cables, road construction that included ocean discharges, dredging to establish and maintain marinas, establishing new dredge

disposal sites, coastal armoring, or construction of pipelines, groins, jetties, piers and marinas. However, authorization of any such uses would be subject to terms and conditions deemed necessary by the Director to protect sanctuary resources and qualities.

- **Regulate uses** – The following known activities in the proposed expansion area would require sanctuary management approval in order for the activity to continue: fireworks launched from the end of the Arena Cove pier (from which debris falls into the ocean), moorings, and Bodega Marine Laboratory discharge. There may be additional existing activities that would require approval. There are three mechanisms to allow otherwise prohibited activities: (1) certification of existing permitted uses within 60 days of final approval of the proposed sanctuary expansion, under the national marine sanctuaries program regulations (15 CFR 922.47);⁷ (2) authorization, as provided for in the proposed action regulations and described above; and (3) national marine sanctuary permits, in limited circumstances, as described above. All three of these options are subject to conditions and limitations.
 - *Fireworks* – Even though the pier and the waters inshore of the pier are outside the sanctuary boundary, deploying fireworks at the end of the pier would potentially result in a prohibited discharge into sanctuary waters west of the pier. This activity could potentially be authorized by the Sanctuary under the authorization provision of the proposed action outlined in the regulations or, if permitted by another agency as of the date of sanctuary expansion, potentially allowed under the national marine sanctuaries certification process. Deployment of fireworks, if determined not to injure sanctuary resources, may qualify for a special use permit.⁸ Therefore there are several ways that fireworks displays can be allowed.
 - *Moorings* – The use of moorings in sanctuary waters is considered both a discharge of material and placement of a structure on, or alteration of, the submerged lands of the sanctuary. Although both of these activities would be prohibited by regulations in the proposed action, moorings could be authorized in the sanctuary (under the proposed authorization provision) if they are authorized or permitted by State Lands Commission, the California Coastal Commission and/or other Federal, State, or local authorities of competent jurisdiction. Existing moorings permitted or authorized by State Lands Commission, the California Coastal Commission and/or other Federal, State, or local authorities of competent jurisdiction could also be allowed under the national marine sanctuaries certification process directly following the expansion of the sanctuary, if the expansion

⁷ National Marine Sanctuaries Program Regulations 15 CFR 922.47 states that “Leases, permits, licenses, or rights of subsistence use or access in existence on the date of designation of any National Marine Sanctuary shall not be terminated by the Director. The Director may, however, regulate the exercise of such leases, permits, licenses, or rights consistent with the purposes for which the Sanctuary was designated.” The regulation requires compliance with certification procedures and criteria promulgated at the time of Sanctuary designation.

⁸ In a separate policy (May 3, 2013), NOAA issued a final list of categories of activities that are subject to the provisions of a special use permit under Section 310 of the National Marine Sanctuaries Act. Relevant categories include: placement and recovery of objects associated with public or private events on non-living substrate of the submerged lands of any national marine sanctuary; placement and recovery of objects related to commercial filming; continued presence of commercial submarine cables on or within the submerged lands of any national marine sanctuary; disposal of cremated human remains within or into any national marine sanctuary; fireworks displays; and the operation of aircraft below the minimum altitude in restricted zones of national marine sanctuaries.

sion is finalized. Recognizing that some existing moorings are not currently permitted or authorized by a competent jurisdiction, NOAA would work with the California State Lands Commission to facilitate a process to bring those moorings into compliance in a similar way as the implementation of the Tomales Bay Vessel Management Plan (2013). The third option, national marine sanctuary permits, under the permit authorities in Section 922.83, would be limited to the scope of the authorities: further research or monitoring related to sanctuary resources and qualities; further the educational value of the sanctuary; further salvage or recovery operations; or to assist management of the sanctuary. The permit option would require State Lands Commission, the California Coastal Commission and/or another Federal, State, or local authority of competent jurisdiction to apply for a national marine sanctuary permit to assist in the management of the sanctuary, subject to terms and conditions. The above-referenced special use permit process also includes a category for temporary placement of objects on non-living substrate of submerged lands, which could be used for temporary moorings. For example, for temporary mooring buoys placed on non-living substrate for a marine event that would require access to the sanctuary.

All other regulations would be the same as the existing GFNMS regulations, including DOD exemptions and vessel desertion provisions.

Sanctuary Management Plan Amendments

For the most part, the existing relevant provisions of the sanctuary management plans would be applied to the expansion area. NOAA is currently developing a programmatic NEPA analysis for West Coast regional field operations, many of which are designed to implement activities described in management plans, such as strategies to reduce ship strikes of whales or field research. The vast majority of activities presented in the CBNMS and GFNMS management plans would not have an impact on the environment because they are administrative in nature or occurring in existing facilities; however, any potential impacts of actually implementing the management plans would be considered in this other programmatic NEPA action. The management plans include the following programs and activities.

CBNMS

Proposed updates to the CBNMS management plan include: revisions to the description and map of CBNMS; technical corrections, including removal of obsolete text and completed actions and inclusion of additional language relevant to the expanded sanctuary area; renaming the Ecosystem Protection Action Plan the Resource Protection Plan; moving the enforcement, emergency response and regulations and permitting activities from the Administration Action Plan to the Resource Protection Plan; adding an activity regarding ship strikes of whales to the Resource Protection plan; adding an activity to encourage and assist agency and port, harbor and marina management entity efforts to improve availability and use of vessel wastewater pumpout facilities and dump stations to the Resource Protection Plan; adding an activity to evaluate specific previously proposed research activities to the Conservation Science Plan; summarizing key partners at the action plan and cross-cut action plan level rather than at the strategy level; deletion of specific products; revision of action plan former timelines and budgets into a summary implementation table in the Administration Action Plan; and updates to the species list appendix.

Activities are also proposed to be added to the cross-cut action plans for CBNMS, GFNMS and MBNMS related to management of the expansion area to ensure effective marine science, outreach, resource protection, staffing and budget allocations.

GFNMS

Proposed updates to the GFNMS management plan include: revisions to the description and boundary map; updated maps in the Wildlife Disturbance and Vessel Spills action plans; technical corrections, including removal of obsolete text and completed actions and extension of relevant actions plans to the expanded sanctuary area; adding activities regarding climate change, working to encourage and assist relevant agencies and entities to improve availability and use of vessel wastewater pumpout facilities and dump stations, white shark stewardship, ship strikes and monitoring of whales, and wildlife protections in the expansion area; deletion of specific products; revision of former timelines and budgets into a summary implementation table, and updates to the species list appendix.

The same activities proposed to be added to the cross-cut action plans in the CBNMS management plan, as mentioned above, would also be added to the cross-cut action plans in the GFNMS management plan.

3.3 No Action Alternative

Evaluation of a No Action alternative is required under NEPA. The No Action alternative is equivalent to the status quo, with regard to sanctuary boundaries and regulations. No boundary adjustments would be made to include additional north central coast waters and no changes would be made to existing regulations or the terms of designation for either sanctuary. All management practices currently occurring in the north coast offshore area would continue. The No Action alternative would involve continuing to implement the current management plans and regulations for the two sanctuaries. Future development and activities in the proposed expansion area would be subject to existing federal and state regulations. No added protection of biological resources, water quality or cultural resources would be provided and the various educational and monitoring programs outlined in the sanctuary management plans would not be implemented in the proposed expansion area.

3.4 Alternative – Application of Existing Sanctuary Regulations

This alternative differs from the proposed action only in the application of regulations. This alternative is similar to the proposal outlined in the Federal Register notice issued for scoping of this EIS.

Description of Boundary

The boundaries of each sanctuary would be the same as described for the proposed action.

Regulations

In this alternative, all relevant existing regulations for both GFNMS and CBNMS would be applied to their expanded boundaries. There would be no changes in regulations from those currently in effect. The differences from the proposed action are summarized as follows for each sanctuary. Existing sanctuary regulations are available for review at the following websites:

- GFNMS Regulations: <http://www.gpo.gov/fdsys/pkg/CFR-2013-title15-vol3/pdf/CFR-2013-title15-vol3-part922-subpartH.pdf>
- CBNMS Regulations: <http://www.gpo.gov/fdsys/pkg/CFR-2013-title15-vol3/pdf/CFR-2013-title15-vol3-part922-subpartK.pdf>
- ONMS Regulations for all sanctuaries and for sanctuary-specific regulations: <http://www.gpo.gov/fdsys/pkg/CFR-2013-title15-vol3/pdf/CFR-2013-title15-vol3-part922.pdf>

CBNMS

- There would be no authorization process to allow certain otherwise prohibited activities that are approved pursuant to a valid Federal, state or local lease, permit, license, approval or other authorization mechanism.
- There would be no exemption for clean graywater discharges.
- Regulations would not include a prohibition regarding possessing, moving, removing, or injuring historical resources.
- The prohibition against interfering with an enforcement action, as described for the proposed action, would not be included in this alternative.
- Permit procedures would not be modified to clarify that the regulations prohibit in all cases the issuance of national marine sanctuary permits for oil, gas or mineral exploration, development, or production. However, oil and gas facilities would be clearly listed as prohibited activities, as in the current regulations.

GFNMS

- The existing exemption for oil and gas pipelines in GFNMS would remain, as described in the existing regulations, which would allow pipelines under specific conditions (see below).
- As in CBNMS, there would be no exemption for clean graywater discharges.
- GFNMS would utilize the existing approval process (referred to as certification process in 15 CFR 922.84) without modification and would not establish an authorization process to allow additional certain otherwise prohibited activities. As described above, the current process allows the Sanctuary to issue a permit, license, or other authorization allowing the laying of any pipeline related to hydrocarbon operations in leases adjacent to the sanctuary and placed at a distance greater than 2 nm from the Farallon Islands, Bolinas Lagoon, and any ASBS. The authority is limited to this type of pipeline and would not allow for the approval of new cables, discharges or other human activities that may be permitted by other agencies after the sanctuary is expanded.
- Existing permits and leases for uses and activities such as cables, Bodega Marine Lab discharge, construction and maintenance of piers or docks could potentially be authorized or “certified” at the time that the sanctuary expansion took place, pursuant to existing national marine sanctuary program regulations (15 CFR 922.47). This would allow for the continuation of these uses in the sanctuary.

- MPWC operation would be prohibited in the expansion area, as it currently is prohibited within the existing GFNMS, without any zones where MPWC operation would be allowed, except when necessary for rescue/safety activities conducted by appropriate public safety agencies, as provided in the existing regulations.
- Cargo vessel prohibition areas would be designated within an area extending 2 nm from the existing ASBSs in the expansion area: Saunders Reef, Del Mar Landing, Gerstle Cove and Bodega (see Figure 3.4-1) rather than establishing Special Wildlife Protection Zones, as described for the proposed action. Cargo vessel prohibition areas in the existing sanctuary would continue as they currently exist; no changes to their configuration within the existing sanctuary boundaries would occur.
- Low overflight prohibitions would be designated within an area extending one nm at the four ASBS in the expansion area (see Figure 3.4-2). Low overflight prohibitions in the existing sanctuary would continue as they currently exist; no changes to their configuration within the existing sanctuary boundaries would occur.
- Regulation of uses at Arena Cove would differ from the proposed action due to the absence of the proposed authorization provision. There would be no mechanism to allow the issuance of an authorization for prohibited activities such as the discharge of fireworks since the authorization provision is only included in the proposed action; it is not in the existing GFNMS regulations. However, the discharge of fireworks could be allowed under a special use permit from the sanctuary superintendent. Pre-existing mooring leases, permits, or licenses could be certified, as described for the proposed action, under the national marine sanctuaries program regulations (15 CFR 922.47). GFNMS could permit new moorings under the permit authorities in Section 922.83(b), which would be limited to the scope of the authorities: further research or monitoring related to Sanctuary resources and qualities; further the educational value of the Sanctuary; further salvage or recovery operations; or to assist management of the sanctuary. GFNMS could issue a permit to allow new moorings for personal use under the authority to assist in the management of the sanctuary if there was a mooring plan similar to the plan developed for Tomales Bay and adopted by State Lands Commission, the California Coastal Commission and/or other Federal, State, or local authorities of competent jurisdiction. As with the proposed action, Sanctuary consideration to allow this activity would require State Lands Commission, the California Coastal Commission and/or another Federal, State, or local authority of competent jurisdiction to apply for a sanctuary permit to assist in the management of the sanctuary, subject to terms and conditions. Until such a plan was developed, GFNMS regulations would not allow permitting of new moorings for personal use.
- As with CBNMS, the following changes outlined in the proposed action would not be implemented:
 - The prohibition against interfering with an enforcement action would not be included in this alternative.
 - Permit procedures would not be modified to clarify that the regulations prohibit in all cases the issuance of national marine sanctuary permits for oil, gas or mineral exploration, development, or production. However, oil and gas facilities would be clearly listed as prohibited activities, as in the current regulations.

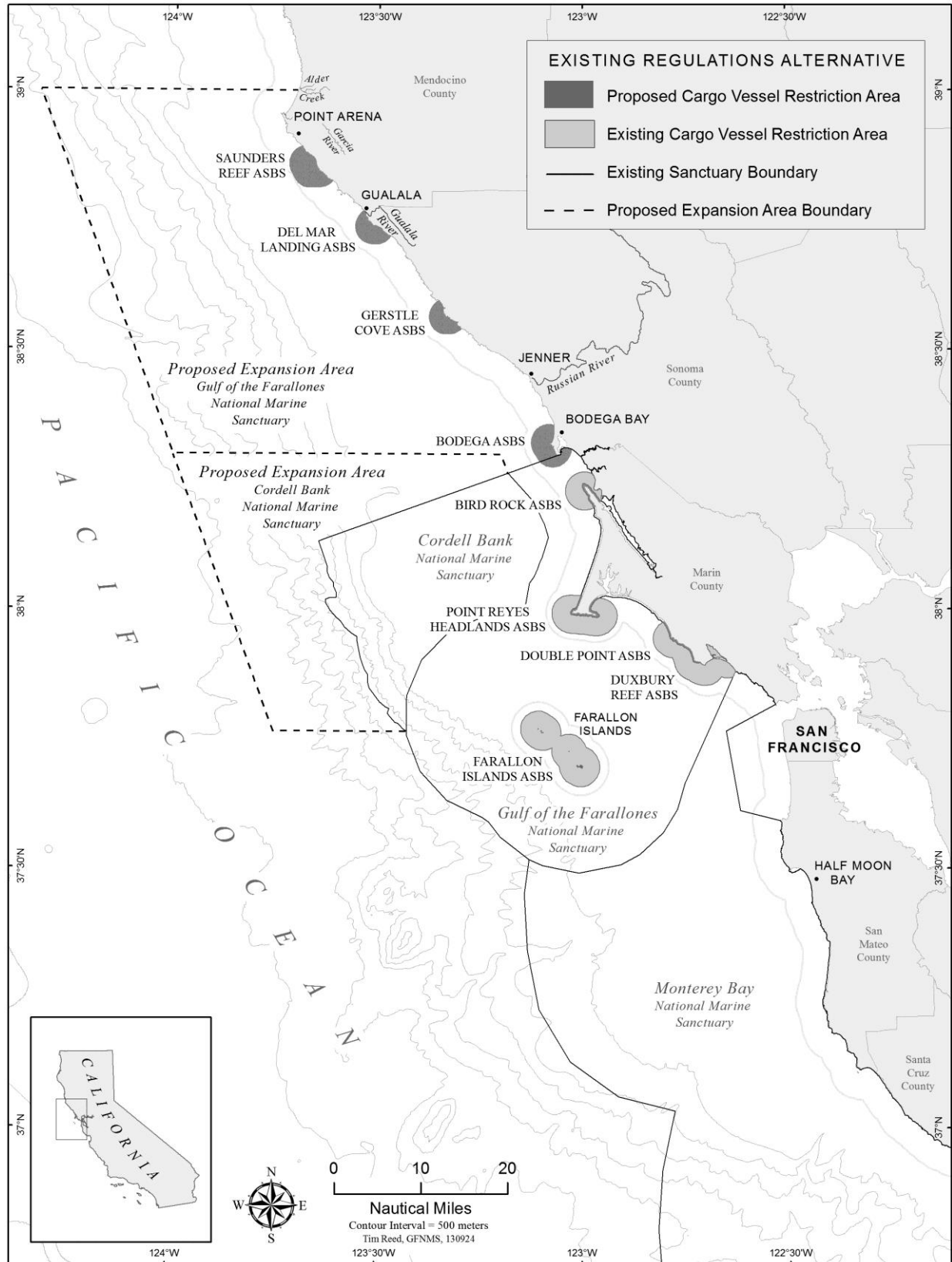


Figure 3.4-1. Existing Regulations Alternative – Cargo Vessel Prohibition Areas

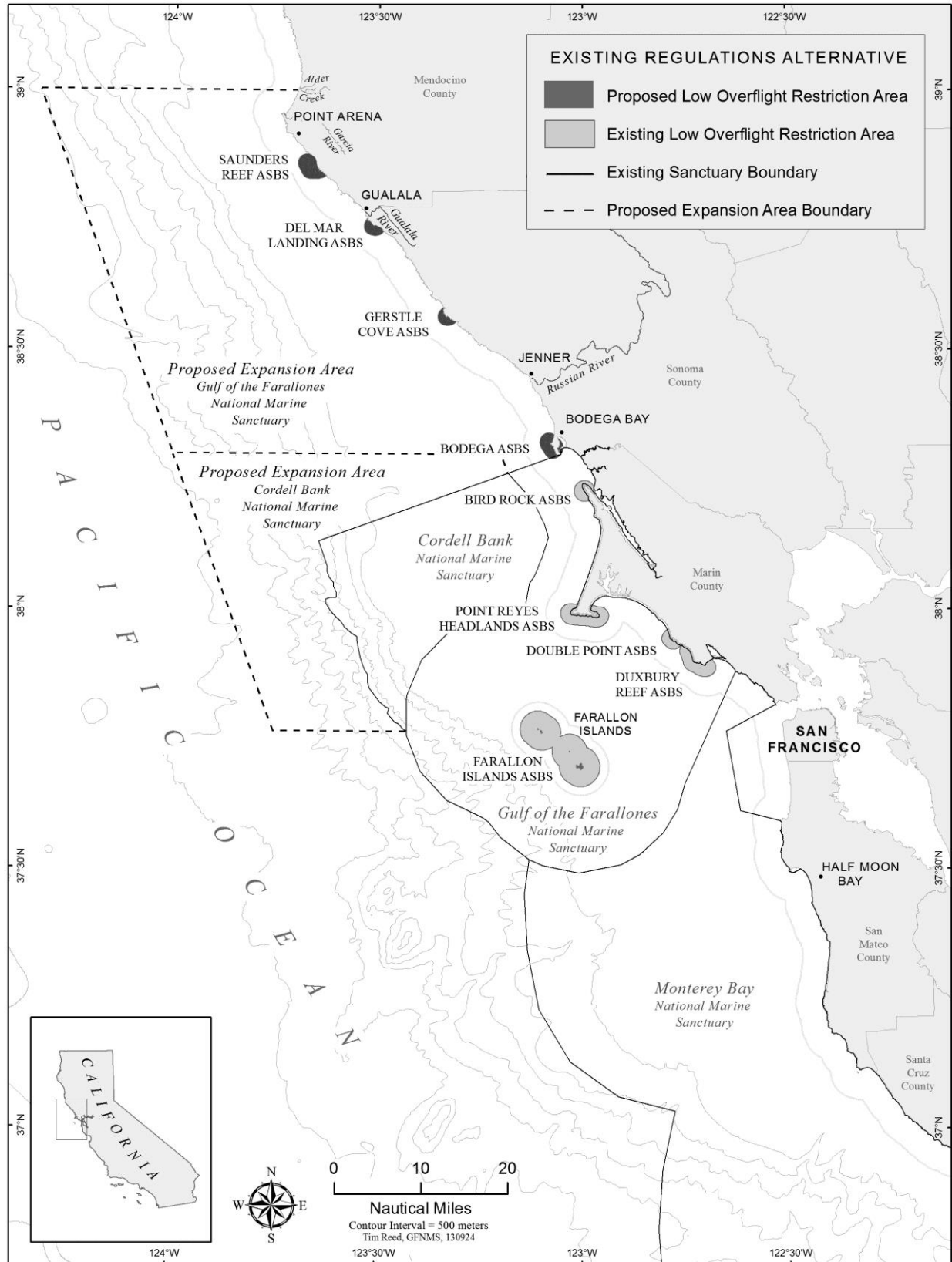


Figure 3.4-2. Existing Regulations Alternative – Low Overflight Restriction Areas

Sanctuary Management Plan Amendments

The CBNMS and GFNMS management plans would be the same as the proposed action. There would be no changes to the GFNMS Wildlife Disturbance Action Plan if this alternative is chosen because each of the strategies focus on outreach, education, monitoring and enforcement of wildlife disturbance incidents throughout the waters of the sanctuary. Each of these strategies would apply whether ASBS or SWPZs are used to establish cargo vessel prohibition areas and overflight restrictions.

3.5 Arena Cove Boundary Alternative

This alternative provides an option for including all of Arena Cove within the GFNMS boundary. This differs from the proposed action in that the proposed action excludes the existing pier and waters east (shoreward) of the pier.

Description of Boundary

The boundary would extend to the Arena Cove mean high water line (MHWL) on the shore and would include docks, a pier and all moorings in Arena Cove.

Regulations

This boundary option could be implemented with either the proposed action targeted regulations (see Section 3.2) or with the existing sanctuary regulations alternative (see Section 3.4). However, if it is included in the existing regulations alternative, the absence of an authorization process (as described for the proposed action) would mean that GFNMS would not have that as a mechanism to authorize other agency approvals for certain uses within the cove. The differences between the proposed action (targeted regulations) and existing regulations alternative regarding the regulation of known uses in Arena Cove are summarized as follows:

- For the proposed action (targeted regulations) – As described in Section 3.2, if fireworks are an activity authorized by any lease, permit, license, approval, or other authorization from another agency, then GFNMS could allow this activity under the proposed action authorization process that would require a Federal, State, or local authority to apply for Sanctuary authorization.

Similarly, if personal use vessel moorings within the boundary of the sanctuary are authorized by State Lands Commission, the California Coastal Commission and/or other Federal, State, or local authorities, then the Sanctuary could allow this activity under the authorization process included in the proposed action. Also, as described for the proposed action, existing permits for uses and activities in the expansion area such as fireworks or construction and maintenance of piers or docks could be “certified” at the time that the sanctuary expansion takes place, pursuant to existing national marine sanctuary program regulations (15 CFR 922.47). This certification would allow for the continuation of these uses in the sanctuary.

GFNMS could issue a permit to allow new moorings for personal use under the authority to assist in the management of the sanctuary if there was a mooring plan similar to the plan developed for Tomales Bay and adopted by State Lands Commission, the California Coastal Commission and/or other Federal, State, or local authorities of competent jurisdiction. As with the proposed action, Sanctuary consideration to allow this activity would require State Lands Commission, the California Coastal Commission and/or another Federal, State, or local authority of competent jurisdiction to apply for a sanctuary permit to assist in the management of the sanctuary, subject to terms and conditions.

All activities related to the construction, repair or maintenance of the pier that have the potential to discharge any material or other matter or place any structure on the submerged lands of the Sanctuary would be prohibited. However, if pier construction or maintenance activities were authorized by any lease, permit, license, approval, or other authorization from another agency, then the Sanctuary could authorize these facilities through the authorization provision in the proposed action.

- For the existing regulations alternative – As described in Section 3.4, if current Sanctuary regulations were applied, existing permitted uses and activities could be certified at the time that the sanctuary expansion takes place, pursuant to existing national marine sanctuary program regulations (15 CFR 922.47). This certification would be the same as for the proposed action and would allow for the continuation of these uses in the sanctuary. There would be no mechanism to allow the issuance of an authorization for new uses that fall under the list of prohibited activities. Existing vessel moorings at Arena Cove that would be within the boundary of this alternative would be subject to sanctuary regulations. These moorings could possibly be allowed through a national marine sanctuary permit, or if these moorings are currently permitted by another agency at the time of sanctuary expansion (as described in Section 3.4), then the nationwide certification process could be used to allow them. The permit process would require State Lands Commission, the California Coastal Commission and/or another Federal, State, or local authority of competent jurisdiction to apply for a Sanctuary permit to assist in the management of the sanctuary, subject to terms and conditions.

All activities related to the construction, repair or maintenance of the pier that have the potential to discharge any material or other matter or place any structure on the submerged lands of the sanctuary would be prohibited. Even if these activities were authorized by a lease, permit, license, approval, or other authorization from another agency, there would be no mechanism to permit or authorize them under the existing sanctuary regulations.

Sanctuary Management Plan Amendments

The GFNMS management plan under this alternative would be the same as the proposed action. Specific geographic areas associated with Arena Cove are not addressed in the management plan. This alternative does not affect the CBNMS management plan; it would be the same as the proposed action.

3.6 Alternative MPWC Zones

This alternative provides different boundaries for two of the proposed MPWC zones (see Section 3.2) in the GFNMS expansion area, as described below. There are two alternatives for MPWC Zone 2 and one alternative for Zone 4. The regulations and management plan would be the same as described for the proposed action.

- Zone 2A (From Arena Cove to Havens Neck) (Area 19.8 sq nm) – This zone differs from the proposed action Zone 2 in size of the area and shape of the nearshore boundary (see Figure 3.6-1). It would create an offshore buffer of 1000 feet to keep MPWC away from the nearshore environment. It would allow for access closer to coves between Moat and Saunders Landing, and between Iversen Landing and Haven's Neck, and would be 0.2 sq nm larger than Zone 2 in the proposed action. In this alternative, a GPS unit could not be used for compliance with the nearshore boundary. However, this is an area with a rocky coastline, steep cliffs and powerful wave conditions, so MPWC users would generally stay this distance from shore, except when accessing the area from Arena Cove.

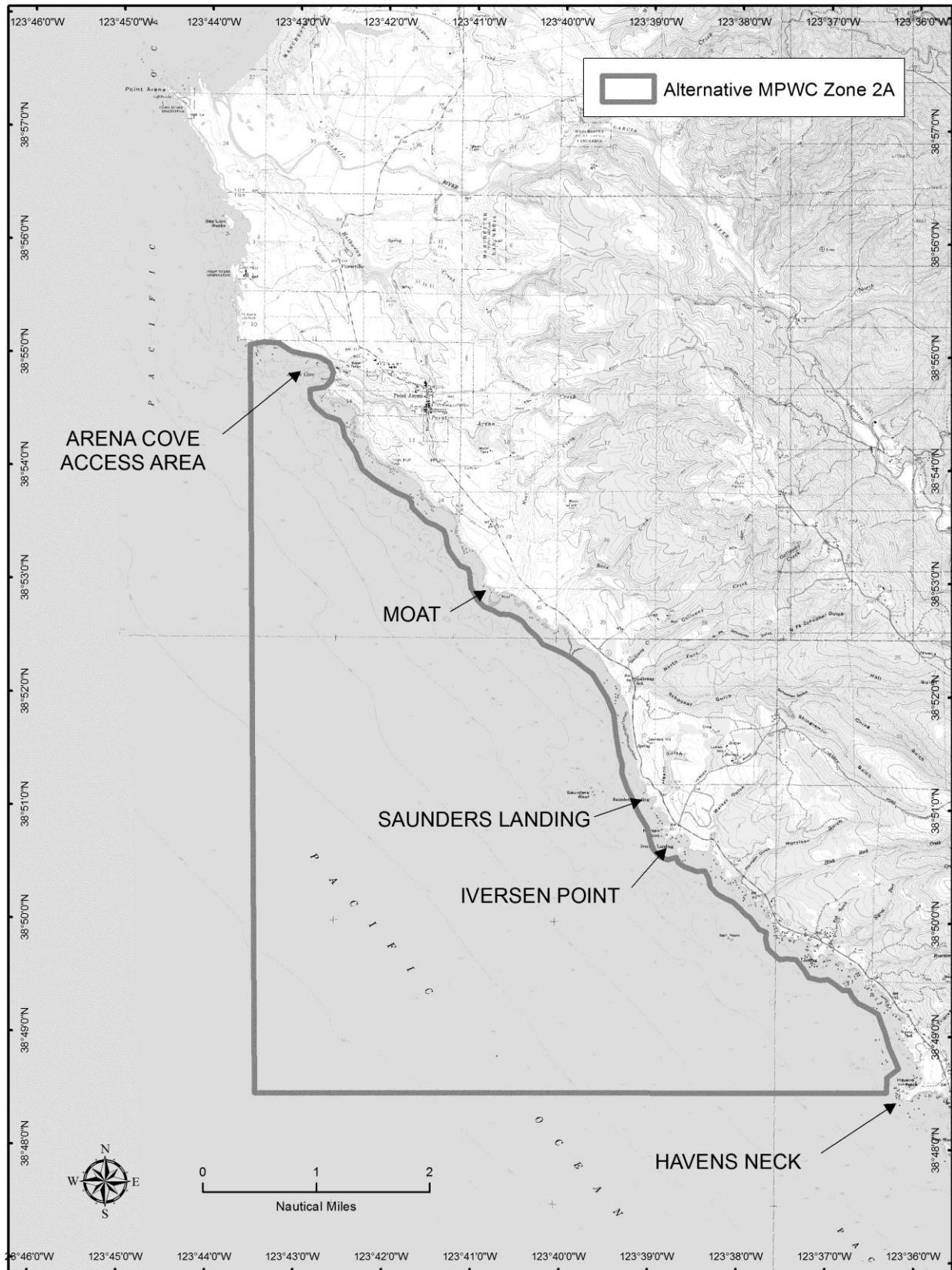


Figure 3.6-1. Alternative MPWC Zone 2A

- **Zone 2B (From Arena Cove to Havens Neck) (Area 21.5 sq nm)** – This zone also differs from the proposed action Zone 2 in size of the area and shape of the nearshore boundary (see Figure 3.6-2). Its boundary would go to the MHWL and would be 1.9 sq nm larger than Zone 2 in the proposed action. There are some areas in Zone 2B where wildlife can rest or roost on rocks when the weather or tides allow, which could potentially cause a disturbance. However, the rocky coastline, steep cliffs and powerful wave conditions will generally keep MPWC users out of the nearshore, except when accessing the area from Arena Cove. This option would also allow MPWC users to land their craft at the two small beaches in this zone, in areas where there is not known breeding seabird colonies or pinniped pupping sites. GPS units can be used for compliance with this zone.
- **Zone 4A (From Bodega Head to Duncan’s Point) (Zone Area 4.3 sq nm; Access Area 0.3 sq nm)** – This zone differs from the proposed action Zone 4 in shape and size of the boundary and area (see Figure 3.6-3). A 100-yard access route from Bodega Harbor to Zone 4A using the Harbor entrance and two navigational buoys would be the only allowed entrance to the zone. To further minimize the potential for nearshore impacts on wildlife, it would not allow access from Salmon Creek, Bean Avenue or the Ranger Station at Sonoma Coast State Beach. It would be smaller in size than proposed Zone 4, but would allow access farther north to Duncan’s Point, a prominent landmark. Waypoints on GPS units would have to be used to ensure compliance with the eastern boundary of the zone from the north end of Carmet Beach to Duncan’s Point.

3.7 Other Alternatives Considered and Eliminated

As described in Section 3.1, numerous boundary alternatives were suggested during the scoping process. In addition, suggestions were made regarding alternative regulations that could be applied to the proposed sanctuary expansion area. These boundary and regulatory modifications were carefully considered but eventually dismissed as the project team focused on alternatives that best achieved the purpose and need of the proposed action.

A range of potentially reasonable alternatives was considered. Alternatives considered but eliminated are described below. These alternatives were proposed by the public, Sanctuary Advisory Council members, or staff. These alternatives were rejected for various reasons, including lack of feasibility, relevance to the purpose and need, the ability to address the particular issue within the scope of existing authority, or the need for more analysis beyond the scope of the current process. For these reasons, these regulations or boundary alternatives were dismissed from further consideration.

Nearshore Sanctuary with Targeted Protections

NOAA (ONMS) considered a boundary alternative that included the same overall area as the proposed action, but instead adjusted boundaries significantly between Cordell Bank and Gulf of the Farallones national marine sanctuaries, such that all waters in the proposed expansion area beyond 12 nm from land would be moved into CBNMS. Public comment received during the public scoping period suggested some form of this alternative should be considered. This alternative was initially evaluated but rejected from detailed consideration because it did not offer significant benefits to meet the overall project objectives.

Moreover, this alternative would have resulted in an even more complicated regulatory adjustment, as site regulations necessary only for GFNMS would have been required for CBNMS — such as the authority to

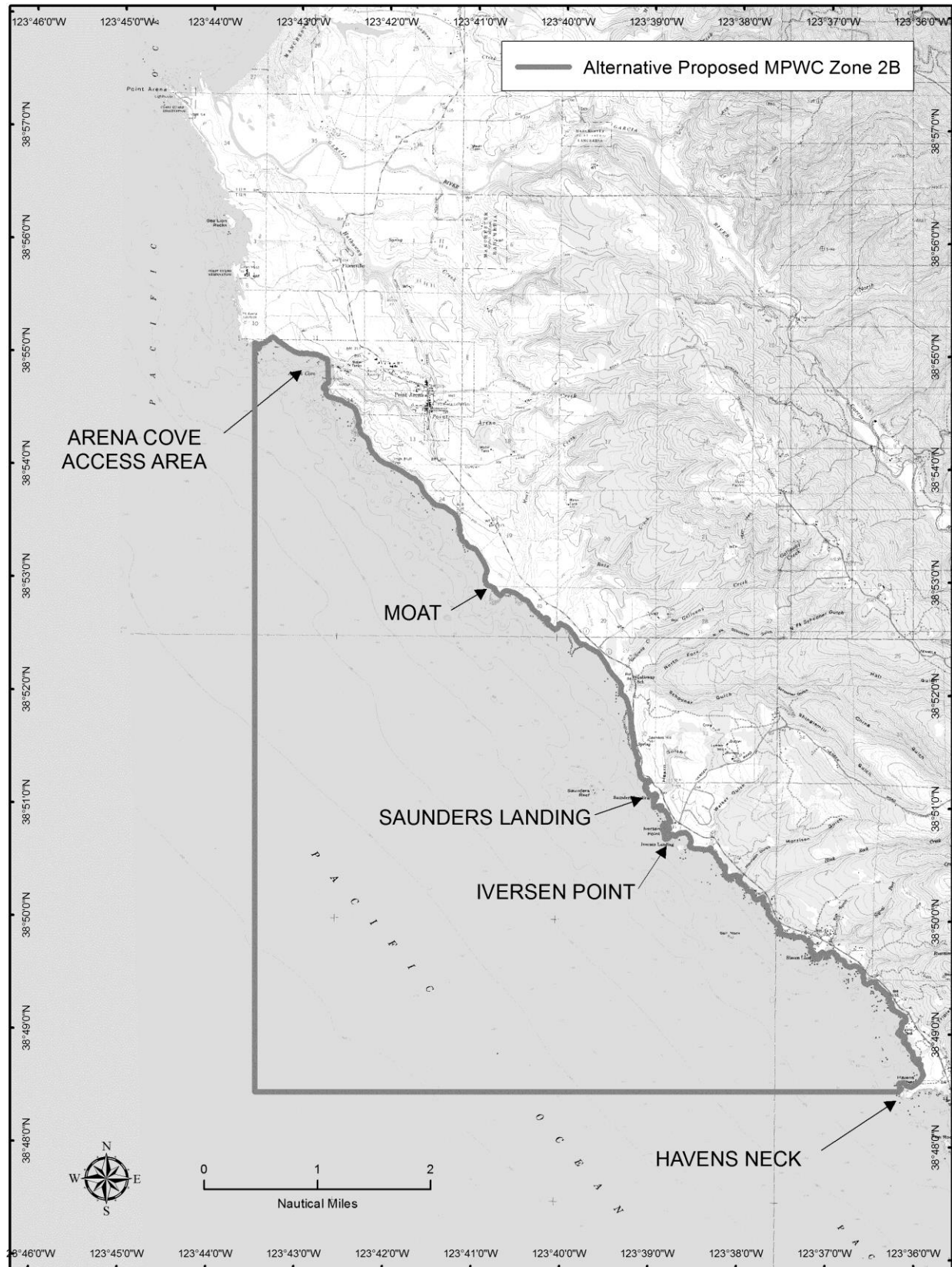


Figure 3.6-2. Alternative MPWC Zone 2B

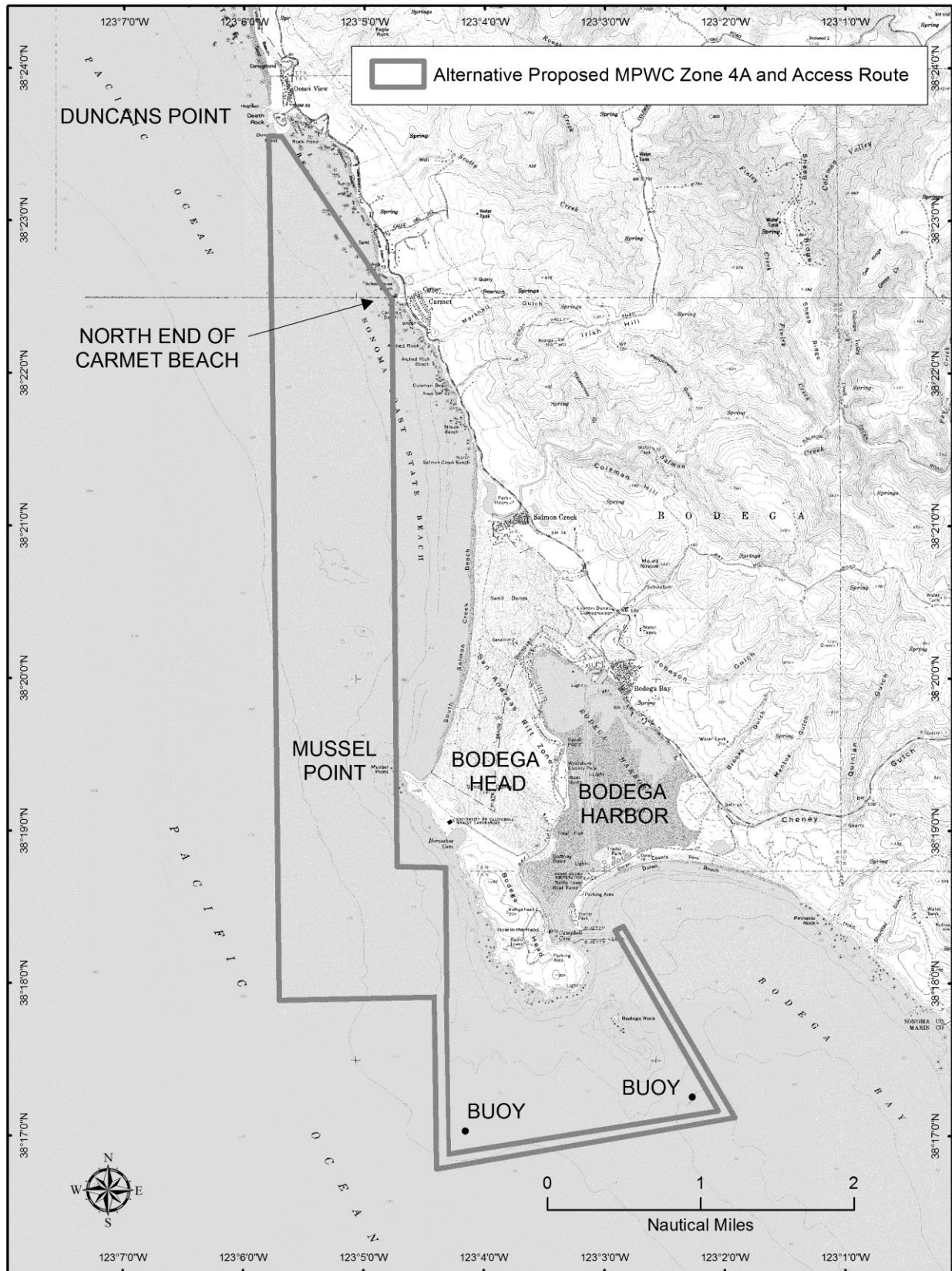


Figure 3.6-3. Alternative MPWC Zone 4A

regulate operating a vessel within the sanctuary and a regulation prohibiting the operation of a motorized personal watercraft. NOAA believes CBNMS has a specific identity linked to the bank itself and the immediately adjacent waters of Bodega Canyon, which would be included in the proposed CBNMS boundary expansion. Expanding CBNMS over 50 miles to the north would diminish the agency's capacity to focus science, management, and education and outreach on Cordell Bank and its immediately adjacent habitats and resources, whereas the GFNMS management already has the experience and expertise required to address many nearshore activities and concerns.

Should the boundaries of both sanctuaries be expanded with this action, ONMS will evaluate if there are benefits to having CBNMS assume a more active role in managing some aspects of the offshore waters of the expanded GFNMS. CBNMS staff and management have particular expertise in studying, managing and carrying out public outreach educating the public about offshore sanctuary resources in the region. CBNMS also largely has considerable expertise in conducting offshore ecosystem monitoring in the existing sanctuary areas. Such an informal arrangement could have more benefits (and be less complicated from a regulatory standpoint) than the formal alternative with significant boundary adjustments mentioned above. Furthermore, ONMS has been successful with a similar arrangement whereby GFNMS manages a northern portion of MBNMS.

Reduced Area

In order to assess the full range of potential alternatives, a smaller sanctuary boundary expansion for GFNMS was considered. This alternative would include only a portion of the oceanic upwelling cell identified in the proposed action. Because the purpose and need is focused on protection of the entire ocean upwelling cell as a unit, this alternative was eliminated from further evaluation.

Larger Boundary Area to the North

Numerous scoping comments suggested expanding the sanctuaries to include a larger area to the north. Several public comments suggested extending the northern boundary to include all of Mendocino County and parts or all of the waters bordering Humboldt County. Other suggestions ranged from including all offshore waters up to Oregon or along the entire Pacific Northwest, from Sonoma County north to Canada or Alaska. These alternatives go beyond the specified purpose and need of the proposed sanctuary expansion because they extend far beyond the geographical area of the upwelling unit that this action is meant to address. Incorporation of these large areas would not be feasible, given existing sanctuary programs and staffing. Furthermore, there are separate processes for establishing new sanctuaries or marine national monuments that could be utilized in these areas in the future to protect their ecological characteristics distinct from those of GFNMS and CBNMS. Under the 1972 Marine Protection, Research and Sanctuaries Act, the Secretary of the Department of Commerce is authorized to designate discrete areas of the marine environment as national marine sanctuaries to promote comprehensive management of their special conservation, recreational, ecological, historical, research, educational, or aesthetic resources. The Congress can also designate national marine sanctuaries.

NOAA ONMS issued a Federal Register Notice on June 28, 2013 for a proposed rule regarding re-establishing the sanctuary nomination process. In summary, this rule would amend ONMS regulations governing the process for nominating and evaluating sites for eligibility for national marine sanctuary designation. Following issuance of the final rule, NOAA may begin accepting new sanctuary nominations.⁹

⁹ For additional information, see Federal Register Volume 78, No. 125, Friday, June 28, 2013, Proposed Rules, Department of Commerce, NOAA, 15 CFR Part 922, "Re-establishing the Sanctuary Nomination Process."

Inclusion of the Russian River Inland Area

Suggestions were made to include the tidally influenced portions of the Russian River and estuarine area within the sanctuary boundaries. While other tidally influenced areas of GFNMS are included in the existing sanctuary such as Bolinas Lagoon and Tomales Bay, there are numerous complex resource management issues within the Russian River being handled by other agencies, including NMFS. It is not clear at this time that adding the sanctuary's regulatory authority to the tidally influenced portions of the river would lead to any greater resolution of those issues and could detract limited sanctuary staff resources from other priorities where sanctuary protection would clearly add value.

Exclusion of Arena Cove

Suggestions were made to exclude from the expansion a far larger area of Arena Cove for any boating and recreational related facilities and activities in Arena Cove that may otherwise be inconsistent with Sanctuary regulations. Some members of the public expressed concern about sanctuary regulations causing potential constraints on the uses and facilities within the cove.

To exclude the entire Arena Cove and the recreational and harbor uses and facilities within it would be inconsistent with sanctuary boundaries drawn in other coastal areas where anchorages exist. In addition, it is not necessary to exclude the area from the expanded sanctuary in order to allow most activities and uses of facilities to continue. This alternative was eliminated because, under the authorization provision of the proposed action, GFNMS could allow existing or proposed uses, such as seasonal anchorages and fireworks by authorizing permits from the California Coastal Commission or other agencies specified in the authorization provision. The proposed project nonetheless excludes a portion of Arena Cove out to and adjacent to the existing pier.

Southern Boundary Extensions

Suggestions were made to include the area known as the “donut hole” or San Francisco–Pacifica Exclusion Area into the proposed expansion area. This area is currently being considered for inclusion in Monterey Bay National Marine Sanctuary waters under a separate proposed rule; see http://farallones.noaa.gov/manage/exclusion_area.html. Other scoping comments recommended extending the sanctuary south all the way to Mexico. Extending existing sanctuaries to the Mexico border is infeasible and is not consistent with the purpose and need for the proposed action. Furthermore, a substantial amount of the coastal area extending from San Francisco to southern California is already designated as national marine sanctuary.

Alternative Regulations

For several particular issue areas, requests were made to develop specific exemptions or other regulations, different from what is in the current sanctuary regulations, or in addition to current regulations. Each of these requests was carefully considered by sanctuary staff. Several “targeted” regulations have been incorporated into the proposed action, as described in Section 3.2.

Chapter 4

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

This chapter provides the NEPA-required analysis of the physical, biological, social and economic issues associated with the proposed action. This introductory subsection is followed by issue-specific analyses of the potential effects of the proposed action and alternatives. Pursuant to the provisions of NEPA, the term effects (or impacts) includes “ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial” (CEQ Section 1508.8).

4.1.1 Chapter Overview/Format

This chapter includes an overview of the baseline physical, biological, social, and economic conditions that occur within the study area of the proposed action (the potentially “affected area” for a particular resource), and analyzes the environmental consequences of the proposed action (preferred alternative), the regulatory and boundary alternatives, and the No Action alternative. The proposed action includes the set of regulations that would apply to the existing and expanded boundaries of each sanctuary, as described in Chapter 3.

The chapter is organized by sections on each resource area or type of use that may be impacted by the proposed action or alternatives, as follows:

- | | |
|---|--|
| ■ Physical Resources (including air quality, climate change, geology, oceanography and water quality) | ■ Socioeconomic Resources, Human Uses, and Environmental Justice |
| ■ Biological Resources | ■ Offshore Energy |
| ■ Commercial Fishing and Aquaculture | ■ Marine Transportation |
| ■ Cultural and Maritime Heritage Resources | ■ Homeland Security and Military Uses |

These subsections are also referred to as issue areas or topics. As applicable, each section includes a definition of the study area for the specific topic covered in the section, a general overview of relevant legislative and regulatory requirements governing the topic, and a discussion of the general conditions of the resource or use within the study area. Because the proposed action includes a series of separate regulatory actions that may not equally affect all areas of the sanctuaries, the focus of the affected environment description is on those resources or uses that may be affected by specific regulatory changes. As a result,

some sections, such as air quality, provide only a general discussion of the resource conditions, while the Biological Resources section provides a more specific discussion of the resources.

The second part of each section describes the methodology used for impact analysis and factors used to determine the significance of direct and indirect impacts (40 CFR 1508.8). Direct impacts are those that are caused by the proposed action and occur at the same time and place. Indirect impacts are those that are caused by the proposed action but occur later in time or are farther removed in distance from the proposed action. The overall methodology for each issue area or topic is consistent with CEQ guidance and NOAA NEPA guidelines (NAO 216-6).

The impact analysis for each issue area includes a description of how the proposed action results in a change in the environment relative to existing conditions and the current regulatory framework. The analysis within each topic focuses on components of the proposed or alternative actions that could result in potentially significant effects. Both adverse and beneficial impacts are identified, where relevant. Finally, the chapter concludes with a comparison of alternatives and discussion of the possible cumulative impacts the project may have when combined with reasonably foreseeable past, present, and future projects undertaken outside the scope of the proposed action.

4.1.2 Scope of Impact Analysis and Study Area

During the public scoping process, numerous issues were raised. These issues were carefully reviewed. To the extent that these issues were relevant to the EIS, they are included in the analysis. In some cases, the proposed expansion and implementation of sanctuary regulations do not affect these identified issues.

Only the background environmental and socioeconomic conditions relevant to the proposed action or alternatives are presented. Resource areas that have been determined to have no potential for impacts by the proposed action or alternatives are not discussed in this EIS. Regulatory changes that are technical in nature and minor technical wording changes that do not change the regulatory intent or compliance requirements and that will result in no direct or indirect impact on any resources in the study area are not discussed in the impact analysis. The analysis of the proposed changes to sanctuary terms of designation is incorporated in the analysis of related proposed regulations since it is the regulations, not the terms of designation, which could result in changes in the environment. Management plan actions that have no potential for impacts, such as administrative actions taking place in existing facilities, are not considered in this EIS. NOAA is currently developing a programmatic NEPA analysis for West Coast regional field operations, many of which are designed to implement activities described in management plans. The vast majority of activities presented in the CBNMS and GFNMS management plans would not have an impact on the environment because they are administrative in nature; however, any potential impacts of actually implementing the management plans would be considered in this other programmatic NEPA action.

Within each issue area, the impact analysis addresses only those elements of the proposed regulations that have the potential to impact the specific resource or use. Where there is no potential for a specific proposed regulation or activity to impact that resource or use, the regulation or activity is not discussed. Furthermore, the complexity of the impact analyses for the proposed action dictates which subheadings are used within individual topic or issue areas. While all resources and uses were considered, categories and subcategories are omitted if they were found to not be impacted by a proposed or alternative action.

The study area for the EIS varies by topic, but is generally the proposed sanctuary expansion area and adjacent shoreline. In some issue areas, the study area is necessarily larger than the proposed expansion area because there is potential for impacts to occur beyond the expanded boundaries, or for conditions outside the expanded boundaries to affect resources or uses within the proposed sanctuary expansion area. Also, there are several new regulations that apply to the existing sanctuaries that would have the potential to impact resources or uses within existing sanctuary boundaries. The nature of existing conditions in the proposed expansion area waters is interpreted from available literature, summarized in the resource sections. Where sufficient location-specific information is available, these data are primarily utilized. Where location-specific data are lacking, general conditions for the study area are utilized with appropriate qualifications. For proposed actions, the methodologies used to determine effects on the physical, biological and human environment are outlined in the individual topic sections.

4.1.3 Determining Significance of Impacts

To determine whether an impact is significant, CEQ regulations (40 CFR 1508.27) and NOAA guidance (NOAA Administrative Order [NAO] 216-6) require the consideration of context and intensity of potential impacts. Context normally refers to the setting, whether local or regional, and intensity refers to the severity of the impact. Also, an EIS should include a discussion of the possible conflicts between the proposed action and the objectives of federal, regional, state, and local land use plans and policies for the area concerned (40 CFR 1502.16 C).

Impacts are defined in the following categories:

- Significant;
- Significant but mitigable to less than significant;
- Less than significant;
- No impact; and
- Beneficial impact.

4.1.4 Resources/Issues Not Analyzed

Of the issues commonly analyzed in a NEPA process, the following list summarizes issues not analyzed in this EIS and the rationale as to why the proposed action or alternatives would not affect these resources.

- Noise – None of the alternatives would have the potential to allow new noise-generating activities that are not currently allowed in the expansion area under existing regulations. The proposed changes to the existing regulations would not affect noise generation within the existing sanctuary boundaries.
- Mineral Resources – There are no existing or planned mineral extraction uses in the proposed expansion area.
- Utilities – None of the alternatives would directly affect utilities or infrastructure. Alternative energy utilities are addressed in Section 4.7 (Offshore Energy). Undersea cables are addressed in Section 4.6 (Socioeconomic Resources, Human Uses and Environmental Justice), under land use and development.

- Visual Resources – None of the alternatives will impact visual resources. If a visitor center or sanctuary office is proposed onshore adjacent to the expansion area in the future, it would be subject to a separate review process. Since no location has been identified for such a facility, it would be speculative to attempt to address it in this EIS.

In addition to the resources listed above, numerous resources discussed in Sections 4.2 through 4.9 will not be impacted by any of the alternatives. These resources are included in the analysis to provide the public with a complete picture of the proposed expansion area.

4.2 Physical Resources

This section addresses air quality, climate, geologic, oceanographic and water quality issues related to the proposed actions. The existing climate, meteorology, air quality, geologic, oceanographic and water quality conditions of the region are generally described, and a summary of federal, State, and local authorities pertaining to these resources is provided. The impact analysis presents the standards used to evaluate impacts on physical resources and addresses potential effects of the proposed actions on each resource.

4.2.1 Regional Overview of Affected Environment

The following regional overview is divided by physical resource topic.

Air Quality and Climate

The study area for the air quality analysis varies according to the type of air pollutant being discussed; some pollutants, such as carbon monoxide, have a localized area of effect, while other pollutants, such as ozone, have a regional area of effect. The federal Clean Air Act requires EPA to set National Ambient Air Quality Standards for six common air pollutants. These commonly found air pollutants (also known as "criteria pollutants") are particle pollution (often referred to as particulate matter), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. These pollutants are called "criteria" air pollutants because they are regulated by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels.

The main sources of air pollution come from diesel exhaust from ship engines, and from incineration of garbage on vessels. Vessel traffic within the sanctuaries contributes to the degradation of air quality. Diesel exhaust has a high sulfur content, producing sulfur dioxide, nitrogen dioxide, and particulate matter in addition to common products of combustion such as carbon monoxide, carbon dioxide, and hydrocarbons.

The proposed expansion area is located primarily within and adjacent to the North Coast Air Basin (NCAB), which has a southern boundary that coincides with the Sonoma/Marin County boundary at Estero Americano and extends north to the Oregon border. A portion of the expansion area is located adjacent to the San Francisco Air Basin (SFAB).

The summer climate of the West Coast is dominated by a semi-permanent high pressure cell centered over the northeastern Pacific Ocean. Because this high pressure cell is quite persistent, storms rarely affect the California coast during the summer. Thus the conditions that persist along the coast of California during summer are a northwest air flow and negligible precipitation. A thermal low pressure area from the Sonoran-Mojave Desert also causes air to flow onshore over the San Francisco Bay Area much of the summer.

The steady northwesterly flow around the eastern edge of the Pacific high pressure cell exerts a stress on the ocean surface along the west coast. This induces upwelling of cold water from below. Upwelling produces a band of cold water that is approximately 80 miles (69.5 nm) wide off San Francisco. During July the surface waters off San Francisco are 17°C (63°F), cooler than those off Vancouver, more than 700 miles (608 nm) farther north. See additional details regarding upwelling in the oceanography, water quality and biological resources sections.

Air approaching the California coast, already cool and moisture-laden from its long trajectory over the Pacific, is further cooled as it flows across this cold bank of water near the coast, thus accentuating the temperature contrast across the coastline. This cooling is often sufficient to produce condensation — a high incidence of fog and stratus clouds along the Northern California coast in summer.

During the winter season, the Pacific High weakens and shifts southward, upwelling ceases, and winter storms become frequent. Almost all of the Bay Area's annual precipitation takes place in the November through April period. Winter rains (December through March) account for about 75 percent of the average annual rainfall; about 90 percent of the annual total rainfall is received in the November-April period; and between June 15 and September 22, normal rainfall is typically less than 1/10 inch. During the winter rainy periods, inversions are weak or nonexistent, winds are often moderate, and air pollution potential is very low. However, there are frequent winter dry periods lasting over a week. It is during some of these periods that CO and particulate pollution episodes develop (BAAQMD 2004a).

The NCAB, which is just north of the SFAB, is comprised of three air districts, the North Coast Unified Air Quality Management District (AQMD), the Mendocino County AQMD, and the Northern Sonoma County Air Pollution Control District (APCD). The North Coast AQMD includes Del Norte, Humboldt, and Trinity Counties; the Mendocino County AQMD consists of Mendocino County; and the Northern Sonoma County APCD comprises the northern portion of Sonoma County. The attainment plans, rules and regulations, and criteria pollutant attainment status are different for each of the three air districts in the NCAB. The NCAB is characterized by moderately wet winters and dry summers with fog and low coastal clouds. Marine breezes from off the Pacific Ocean dominate the climate of the NCAB. Westerly winds predominate in all seasons but are strongest and most persistent during the spring and summer months. The extent and severity of the air pollution problem in the NCAB is a function of the area's natural physical characteristics (weather and topography), as well as human-created influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the NCAB area. In general, the air pollution potential of the coastal areas is relatively low due to persistent winds.

The SFAB is managed by the Bay Area Air Quality Management District (BAAQMD) and includes the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, Santa Clara, San Mateo, plus portions of Solano and Sonoma Counties. The San Francisco Bay Area climate is similar to the NCAB in that it is characterized by moderately wet winters and dry summers.

The U.S. Environmental Protection Agency (USEPA) has established national ambient air quality standards (NAAQS) for ozone, nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), 10-micron particulate matter (PM₁₀), 2.5-micron particulate matter (PM_{2.5}), and airborne lead. Areas with air pollution levels above these standards are considered "nonattainment areas" and are subject to planning and pollution control requirements that are more stringent than normal requirements.

In addition, the California Air Resources Board (CARB) has established standards for ozone, CO, NO₂, SO₂, sulfates, PM₁₀, airborne lead, hydrogen sulfide, and vinyl chloride at levels designed to protect the most sensitive members of the population, particularly children, the elderly, and people who suffer from lung or heart diseases.

Both State and national air quality standards consist of two parts — an allowable concentration of a pollutant, and an averaging time over which the concentration is to be measured. Allowable concentrations are based on the results of studies of the effects of the pollutants on human health, crops and vegetation, and, in some cases, damage to paint and other materials. The averaging times are based on whether the damage caused by the pollutant is more likely to occur during exposures to a high concentration for a short time (one hour, for instance) or to a relatively lower average concentration over a longer period (eight hours, 24 hours, or one month). For some pollutants there is more than one air quality standard, reflecting both its short-term and long-term effects. The California ambient air quality standards are generally set at concentrations that are lower than the federal standards and in some cases have shorter averaging periods.

The entire NCAB is currently designated as nonattainment for the State 24-hour and annual average PM₁₀ standards. The air basin is designated as unclassified for the State annual PM_{2.5} standard — available data are insufficient to support designation as attainment or nonattainment. Particulate matter has declined since the 1980s, primarily due to a changing industrial base, increased regulations regarding burning and enforcement of regulations (Mendocino AQMD 2005).

The SFAB is designated as a nonattainment area for the federal eight-hour ozone standard. Under the California Clean Air Act (CCAA), the basin is a nonattainment area for the State ozone standard. The Bay Area currently attains the national annual average and 24-hour standards for PM₁₀, and the national annual average standard for PM_{2.5}. USEPA changed the national 24-hour PM_{2.5} standard from 65 µg/m³ (micrograms per cubic meter) to 35 µg/m³ in 2006. Based on air quality monitoring data for the 2006-2008 period, which showed the Bay Area exceeding the revised standard by a small margin, the USEPA designated the Bay Area as non-attainment for the 24-hour national PM_{2.5} standard in December 2009. However, since that time, Bay Area PM_{2.5} levels have declined. Although the Bay Area is still officially designated as non-attainment, monitoring data for 2008-2010 shows that the Bay Area met the 24-hour national PM_{2.5} standard during this period (BAAQMD 2013). The Bay Area, like virtually all of California, is designated as nonattainment for the State PM₁₀ standard. The Bay Area, like most urban areas, is also designated as nonattainment for the State PM 2.5 standard. The basin is classified as attainment or unclassified for the rest of the state and federal pollutant standards (BAAQMD 2013).

Climate Change

Climate is defined as the average statistics of weather, which include temperature, precipitation, and seasonal patterns such as storms and wind, in a particular region. Global climate change refers to the long term and irrevocable shift in these weather related patterns, including the rise in the Earth's temperature due to an increase in heat-trapping or "greenhouse" gases in the atmosphere. Using ice cores and geological records, baseline temperature and CO₂ data extends back to previous ice ages thousands of years ago. Over the last 10,000 years, the rate of temperature change has typically been incremental, with warming and cooling occurring over the course of thousands of years. However, scientists have observed an unprecedented increase in the rate of warming over the past 150 years, roughly coinciding with the global industrial revolution, which has introduced tremendous amounts of greenhouse gases into the atmosphere.

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of greenhouse gases (GHGs) that contribute to global warming or global climate change have a broader, global impact. Global warming is a process whereby GHGs accumulating in the atmosphere contribute to

an increase in the temperature of the earth's atmosphere. The principal GHGs contributing to global warming are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and fluorinated compounds. These gases allow visible and ultraviolet light from the sun to pass through the atmosphere, but they prevent heat from escaping back out into space (BAAQMD 2013).

Among the potential implications of global warming are rising sea levels, and adverse impacts on water supply, water quality, agriculture, forestry and habitats. In addition, global warming may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health. Like most criteria and toxic air contaminants, much of the GHG production comes from motor vehicles and to a lesser extent motorized marine vessels. Climate change affects public health because the higher temperatures result in more air pollutant emissions, increased smog, and associated respiratory disease and heart-related illnesses.

Within and adjacent to the proposed expansion area, the coastal wetlands and rocky intertidal areas are threatened by sea level rise and cannot naturally move inland in some areas due to existing developments and resistant cliffs. This condition has the potential to threaten the region's fish species and may allow non-native species to thrive.

Geology and Oceanography

Geology

Geologic features in the study region include rocky shores, sandy beaches, islands, sea stacks, pinnacles, ridges, underwater canyons, the continental shelf, the slope, and the abyssal plain, which reaches depths of over 10,000 feet (3,000 meters). Bottom types on the continental shelf include sand and mud sediments, rocky outcrops, and reefs. Some of the unique features of the area include underwater canyons, tectonic features, and fossils. The project area is located on a plate boundary that separates the North American and Pacific Plates and is marked by the San Andreas Fault. This seismically active region experiences regular earthquakes, submarine landslides, turbidity currents, flood discharges, and coastal erosion.

The study area is tectonically active with the San Andreas fault running along the coast from Bodega to Point Arena and entering the ocean at Alder Creek, at the northern end of the proposed expansion area. Both sedimentary and metamorphic rocks occur on either side of the fault and in different nearshore areas along the coast. Rocks to the east of the fault are part of the North American Plate and those to the west, including Point Arena, are carried by the Pacific Plate. Most of the ocean area is on the Pacific plate. Sedimentary rocks are of the Franciscan complex, Great Valley Complex, and Salinian terrane (CDFG 2007). The unstable nature of many coastal cliffs has led to high rates of erosion (with average long term rates of approximately 10-30 cm/year) and some large scale landslides (Griggs and Patsch 2004). The coastal cliffs between Jenner and Fort Ross are constantly eroding and present challenges for maintaining the coastal highway.

Point Arena, at the north end of the study region, is a rocky peninsula on an elevated coastal plain in Mendocino County. Just north of Point Arena, the Garcia River empties into the ocean from a small estuary. The Gualala River enters the ocean about 18.6 miles south of Point Arena and forms a seasonal coastal lagoon behind a sandbar. The Sonoma coast is characterized by a relatively narrow shelf, a steep rocky coastline, and nearshore rocky reefs. The Russian River, which drains a very large watershed in Sonoma

and Mendocino Counties, meets the ocean at Jenner where a coastal lagoon forms seasonally behind a sandbar and a freshwater tidal plume extends from the coast during the wet season (CDFG 2007).

The coastline is comprised of sandy beaches, steep cliffs and marine terrace. The nearshore subtidal area contains soft bottom areas and extended areas of complex reef habitat. Many exposed rocks in the nearshore area are part of California Coastal National Monument (CCNM, managed by Bureau of Land Management [BLM]). Most of the larger sandy beaches are located toward the southern end of the proposed expansion area between Bodega and Jenner. North of Jenner, the coast is mostly rocky with isolated pocket beaches. North of Gualala, the coast is rocky, but there are some larger beaches south of Point Arena. At Bowling Ball Beach, part of Schooner Gulch State Beach, there are spherical “bowling ball” concretions which originate from the mudstone cliffs, many lined up the bedrock channels below the cliffs, which have been likened to “bowling lanes.”

Bodega Canyon is a prominent submarine feature in close proximity to the northern boundary of the existing Cordell Bank National Marine Sanctuary. This seafloor feature, which is over 12 miles long and about one mile deep, cuts across the continental shelf and slope 3 to 6 miles north of the existing boundary of the sanctuary.

Submarine canyons provide areas of high bathymetric complexity, support deep water communities, and affect local and regional circulation patterns. Offshore canyons provide habitat for adult stages of rockfish and flatfish that rear in nearshore waters and move offshore in their adult stages (CDFG 2007). Limited work in Bodega Canyon has revealed mud-draped hard bottom on the canyon edges with some corals and fishes associated with the hard substrate (CBNMS unpublished report). In addition, offshore canyons and other bathymetric features are important foraging areas for seabirds and marine mammals (Yen et al. 2004).

Although the continental shelf is narrower in this region (about 17-28 miles wide or 15-25 nm), the shelf still comprises a significant portion of the proposed expansion area. The shelf break is defined as the 200-meter depth contour. Most of the shelf area is composed of soft bottom with occasional rock outcrops or deep reef features. The continental slope area is deeper than 200 meters and is primarily soft bottom with some hard bottom outcrops and ridge systems.

The following summary is excerpted from Shaw’s (2007) geologic characterization of the area for the CCNM, which included field observations.

CCNM Subunit 11 Arena Cove to 39 degrees north – 8 mi

At Point Arena, Miocene marine deposits dip gently seaward and are overlain by thin Quaternary terrace deposits. Dune sand overlies all other deposits on the north end of the Point. Point Arena is 3 miles west of where the San Andreas Fault passes northwestward into the Pacific Ocean. Lower Miocene strata are exposed in cliffs that line the coast from Point Arena southward. The rocks consist of light tan colored mudstones and shales.

CCNM Subunit 12 Arena Cove to Gualala Point – 16 mi

Miocene and Cretaceous deposits are exposed along different segments of the coast between Arena Cove and Gualala Point. Pleistocene marine deposits overlie these units on wave cut terraces, which also are

believed to be of Pleistocene age. Basalt intrusive rocks of probable Tertiary age are exposed at Iverson Point. Miocene strata in Subunit 12 are similar to those exposed over much of the coast west of the San Andreas Fault. The rocks are light tan in color with very high microscopic porosity, making the rock very low in density. Rocks in the offshore shallows are relatively small north of Iverson Point. South of Iverson Point, Cretaceous rocks crop out at the shore and rocks become numerous and among the largest on the coast, as at Fish Rocks near Anchor Bay.

CCNM Subunit 13 Gualala Point to Fort Ross Reef – 30 mi

One mile south of the town of Gualala, at The Sea Ranch development, Paleocene strata intersect the coast and continue southward for a distance of approximately 4 miles. South of The Sea Ranch, the coast is bordered by Cretaceous strata for a distance of about 8 miles. A three-quarter-mile segment of the coast north of Black Point exposes Tertiary basalt in a small fault slice. Numerous rocks and pinnacles of the CCNM line the region offshore. These presumably are composed of the various hard strata associated with the Cretaceous. Paleocene and Eocene strata crop out along the coast for 20 miles to the south of Stewart's Point, ending one mile northwest of Fort Ross Reef. The remaining mile southeast of the termination of the Eocene outcrop consists of lower Miocene strata similar to that at Point Arena. At The Sea Ranch, south of Gualala, Paleocene strata underlie a wide terrace that ends at the ocean in steep cliffs. Numerous large, flat CCNM rocks are offshore. One of the largest is called Gualala Island and is mapped as Cretaceous. The Paleocene and Eocene outcrop belts produce numerous CCNM rocks and pinnacles of significant size and number. At the Fort Ross Reef, the lower Miocene forms the reef to which the name refers.

CCNM Subunit 14 Fort Ross Reef to the Bodega Point Peninsula – 70 mi

The Franciscan Formation lines the coast north and south of the Russian River. The rocks lie in the same belt as the Franciscan exposed near the Golden Gate Bridge in southern Marin County (Kleist 1981, Rice 1981). These include sandstones, greywacke sandstones, limestones, volcanic rocks and a matrix of clay mudstone (Kleist 1981, Rice 1981, Hall 1981). The Franciscan formation east of the San Andres Fault exposes strata that are somewhat different from that exposed west of the fault (Kleist 1981, Rice 1981, Hall 1981). West of the fault the Franciscan consists largely of metamorphosed basaltic lava flows (Kleist 1981). Metamorphism has produced greenstones rich in chlorite and epidote. Above the greenstones are banded cherts that alternate with black shales, both on the order of one inch thick, or less. The mouth of the Russian River lies eastward of the San Andreas Fault, which passes offshore at Bodega Head and reappears on land near Fort Ross Reef.

Oceanography

Much of the oceanography resources information was excerpted from the California Marine Life Protection Act Initiative Regional Profile of the North Central Coast Study Region (CDFG 2007). Additional information was excerpted from the Jmpr EIS (NOAA 2008).

The study region is part of the California Current Large Marine Ecosystem (LME), one of only four temperate coastal upwelling systems in the world. The California Current LME is considered globally important for biodiversity because of its high productivity and the large numbers of species it supports (World Wildlife Fund 2000). The California Current LME extends from Vancouver Island to Baja California. It is a very productive ecosystem fueled by nutrient-rich upwelling of cold, deep ocean waters to

the surface. This upwelling of nutrients supports blooms of phytoplankton that form the foundation of a food web that includes many species of invertebrates, fish, marine mammals and seabirds. The study region is in the central part of the California Current LME and includes the entire scope of a strong and persistent upwelling center at Point Arena, which provides the source water for much of the productivity that occurs to the south. Because of effects related to coastal topography and ocean circulation, the Point Arena upwelling system is isolated oceanographically from the Cape Mendocino upwelling cell to the north. Circulation of surface water associated with upwelling at Cape Mendocino creates a relatively tight eddy between Cape Mendocino and Point Arena, and surface water is transported offshore north of Point Arena. Water upwelled at Cape Mendocino that is transported offshore rarely mixes with coastal waters that are south of the Point Arena upwelling center (Halle et al. 2010). The Point Arena upwelling center is strongly linked with areas to the south and analysis of ocean currents, water properties, and chlorophyll show a strong association between water upwelled at Point Arena and coastal water masses off southern Mendocino, Sonoma and Marin Counties (Halle and Largier 2011). Nutrients from the Point Arena upwelling center support a healthy and diverse assemblage of organisms including fishes, seabirds, and mammals that make this a biologically significant area in the northeast Pacific Ocean (NCCOS 2003). The cold, nutrient-rich waters flow from the upwelling center at Point Arena south along the southern Mendocino coast and entire Sonoma coast, deflect offshore at Point Reyes and flow out into the Gulf of Farallones. During the upwelling season, the surface waters are rich in nutrients that fuel a highly productive and diverse ecosystem, with large numbers of top predators that are dependent on this seasonal abundance of prey resources. The nutrients fuel a productive pelagic foodweb that includes phytoplankton, krill and other zooplankton, coastal pelagic species (anchovies, sardines, squid, etc.), sharks, other fish, seabirds and marine mammals. High local productivity also attracts many migratory species. High concentrations of phytoplankton and zooplankton from the Gulf of the Farallones and over Cordell Bank move north during periods of calm winds. When winds relax high levels of phytoplankton are observed repeatedly along the coast between Point Reyes and Point Arena (Largier 2013a). Relative to other parts of the state, this study region is very important to many species of top predators that are key components in the coastal and open ocean food webs. There are specific areas in the region that are important foraging and breeding grounds for populations of some top predators (Karl et al 2001; Yen et al 2004).

Major coastal rivers and streams also introduce freshwater, sediment, nutrients, and pollutants into near-shore waters. While typically localized in impact, and with strong seasonal variability, these features may dominate the oceanographic habitat in plume regions. The Russian River plume is the largest. Suspended sediment from the Russian River can extend up the shelf to Point Arena (winter deposition) while low-salinity effects due to the Russian River outflow can be seen as far south as Point Reyes in the early upwelling season (specifically, in years of late spring rains).

The oceanographic year can be broken into three seasons: upwelling season, relaxation season, and winter storm season. The upwelling season typically begins with the spring transition, characterized by strong persistent winds from the northwest. This usually occurs sometime in late February or early March, and is the start of the annual productivity cycle along north central California. During this season, upwelling driven by winds from the northwest alternates with periods of calm. These winds generally begin to subside by late July. August through mid-November is the relaxation season. During this time, winds are mostly light and variable, and the seas can be calm for one to two weeks at a time. This condition changes abruptly with the arrival of the first winter storms from the Gulf of Alaska. From late November through early

February, winter storms create large waves and strong winds along the coast. Physical processes operating on different temporal and spatial scales drive hydrodynamics along this section of the coast. Toward mid-November, the Davidson Current flows counter, e.g. northward, to the California Current, bringing warmer water at the surface. Like the oceanic period, nearshore eddies also characterize this phase in many places. Northward flowing waters function as the dominant inshore transporter of suspended nutrients. Southwest winds and other physical forces drive Davidson Current waters shoreward so as to displace coastal waters and induce downwelling.

Longer-term oceanographic variations also occur in the region, including sporadic El Niño Southern Oscillation events, Pacific Decadal Oscillation, and global warming. These phenomena affect local physical and biological systems. In the north central coast region of California, El Niño Southern Oscillation events are marked by the warming of nearshore waters due to equatorial Pacific trade winds relaxing. The onshore and northward flow increases, and coastal upwelling of deep, nutrient-rich water diminishes. Pacific Decadal Oscillation events are known to occur every 20 to 30 years (the most recent event occurred in 1998). These events occur when the surface waters of the central and northern Pacific Ocean shift several degrees from the mean water temperature. The waters off the California coast have warmed significantly over the last forty years, possibly a result of global warming or interdecadal climate shift (NOAA 2003).

Water Quality

The water quality study area extends beyond the sanctuaries' proposed boundaries due to potential impacts from outside the proposed boundaries. For example, pollutants may be carried by ocean currents and there are freshwater inputs from rivers and tributaries. These discharges into the marine environment adjacent to the sanctuary expansion area could impact water quality. Therefore, the study area for freshwater input comprises more than 40 coastal streams and three large rivers that contribute to the nearshore chemical characteristics of the proposed expansion area. The three major freshwater sources are the Russian, Gualala and Garcia rivers. These rivers are affected by multiple activities in the watersheds including but not limited to agriculture, rock and gravel mining, grazing, logging, land development (SWRCB 2010), and septic system leakage. The freshwater inputs from the many coastal creeks are minor sources of chemical constituents and nutrients to the sanctuaries. In total, the study area includes oceanic waters within the expansion area, the marine areas adjacent to the expansion area, and the watersheds contributing to the marine water quality in the proposed expansion area.

In general, the marine water in the proposed expansion area is considered to be of relatively good quality due to the rural nature of most of the northern coast of California. Along the coast adjacent to the proposed expansion area, there is less than 4 sq miles of agricultural land and the sparsely developed areas along the coast have on the order of 93 people per square mile north of the town of Gualala and 7 to 36 people per square mile south of Gualala along the coast (ESRI 2010). Most of the coastal watersheds are comprised of forest and grass lands (USGS 2009). However, there are numerous persistent threats to water quality in the study area due to runoff from the Garcia, Gualala, and Russian Rivers and San Francisco Bay (Largier 2013b). In some cases, these contaminants can result in a variety of biological impacts, including bioaccumulation, reduced recruitment of anadromous species (e.g., salmon, that migrate from salt water to spawn in fresh water), mortality due to toxicity, pathogen contamination, and interference with recreational uses of coastal areas. These adverse water quality impacts can impair designated benefi-

cial uses (CDFG 2007). Additionally, there are sources of marine water pollution, which include vessel sewage and graywater discharges, engine emissions, spill incidents, and illegal dumping.

Some locations within the study area are designated to protect water quality. The State Water Resources Control Board (SWRCB) establishes “areas of special biological significance” (ASBS) through the California Ocean Plan. ASBS are a subset of State water quality protection areas (SWQPAs) that are “designated to protect marine species or biological communities from an undesirable alteration in natural water quality...” (Public Resources Code Section 36700[f]). These areas were designated based on the presence of certain species or biological communities that, because of their value or fragility, deserve special protection by preserving and maintaining natural water quality conditions to the extent practicable. One example of special protection is a prohibition on the discharge of both point and nonpoint source waste, unless the State Water Resources Control Board grants an exception after determining that the exception will not compromise protection of ocean waters for beneficial uses, and, the public interest will be served. There are four ASBS within the expansion area: Saunders Reef, Del Mar Landing, Gerstle Cove, and Bodega ASBS (SWRCB 2012). Although the total area combined in these ASBS are approximately 1.1 sq nm, which is less than 0.05% of the proposed expansion area, each of these areas benefit from protection beyond that offered by standard waste discharge restrictions and other measures.

Through the National Pollutant Discharge Elimination System (NPDES), there is one permitted source of discharge into the study area from land at the University of California Davis Bodega Marine Laboratory. There is a waste water treatment facility at Point Arena on the coast, however the discharge is to four percolation ponds and not directly to the ocean. There is also a waste water treatment plant with an NPDES permit operated by the Russian River County Sanitation District and Sonoma County Water Agency which discharges tertiary treated effluent to the Russian River just downstream of the town of Guerneville from October 1 to May 14. The plant treats 0.71 million gallons per day (mgd) (average dry weather treatment capacity) and 3.5 mgd (peak wet weather treatment capacity). Vessel discharges in the study area are also regulated under the NPDES, through the Vessel General Permit (VGP).

All three of the main rivers (Garcia, Gualala and Russian) in the study area do not meet established water quality standards under the Clean Water Act (CWA). When this occurs, a water body is placed on an impaired waters list mandated by §303(d) of the federal Clean Water Act. States are required to update this list every two years and work to resolve the problems associated with the listed water bodies. Typically, a total maximum daily load (TMDL) is developed for such impaired waters. A TMDL determines the total amount of the pollutant/stressor (e.g. pathogens, sediment, nutrients) that the water body can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources (SWRCB 2010). The TMDL then allocates the allowable loading to all point and non-point sources to the water body and establishes an implementation plan to ensure that the allocations and water quality standards are achieved. Based on information in the 2010 California SWRCB Integrated report on Water Quality, the Garcia, Gualala, and Russian Rivers are designated as impaired primarily due to sedimentation/siltation and water temperature. The Lower Russian River and Clam beach (just north of Fort Ross State Historic Park) are listed for pathogens. Most expected TMDL completion dates are 2019 (SWRCB 2010).

Key sources of pollution, especially as related to the proposed action, are described in greater detail below.

Land-based Pollution (Point Source and Nonpoint Source)

There is very little activity in the watersheds flowing to the ocean that is detrimental to ocean water quality in this region. Land-based pollution comes from either point source or non-point sources. Point source pollution originates from known sources such as industrial facilities or wastewater treatment plants. Non-point source pollution is more diffuse and comes from many different sources that cannot be identified. It includes pollutants such as oil, grease, fertilizers, metals, and sediments that are collected by rain or irrigation water that then carries the runoff from streets and parking lots to surface and ground water (USEPA 2013a). The large river systems have the most potential to impact the nearshore environment and typical sources of pollutants include livestock grazing, agriculture, and land development. The threat is relatively minor for most of the coastal marine area of the study area due to minimal pollution sources and the strong circulation patterns of the Pacific.

Other land-based pollution of nearshore waters includes runoff from San Francisco Bay, aging sewer infrastructure systems or septic system malfunctions, and other unknown or unidentified sources. Most of the coastal communities use septic systems, which can be a source of potential nutrient loading from leaking septic systems.

The State Mussel Watch monitoring results discussed in the ASBS Environmental Impact Report found high levels of pesticide compounds in at least one sample between 2001 and 2004 at Bodega Head and the highest concentration of all ASBS in the state for Chromium from 2007 to 2009 at the same location (SWRCB 2012).

Beach closures result from known discharges of sewage that enter the marine environment. Beach advisories occur when laboratory results indicate that fecal indicator bacteria in a water sample exceed water quality standards. Within the study area, the Sonoma County Division of Environmental Health collects water samples for beaches monitored pursuant to California Health and Safety Code § 115880. There are five beaches that are monitored on a weekly or monthly basis in Sonoma County. For the period from 2000 to 2009, all five beaches were closed twice, and one as many as seven times. An advisory means the objective set by the USEPA for fecal indicator bacteria was exceeded. Salmon Creek State beach was closed five times (SWRCB 2013). None of the beaches within the southern Mendocino County portion of the study area are monitored by the California Department of Health because there are no beaches there that meet the criteria for beach monitoring (mainly beach visitation of more than 50,000 per year). In general, it appears that the water quality at most beaches within the study area is very good. For all of the postings, the sources were either unknown or wildlife.

There are many non-traditional municipal separate storm sewer systems (MS4s) adjacent to the study area. A MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains). Small MS4s include systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares, but do not include separate storm sewers in very discrete areas, such as individual buildings [40 C.F.R. §122.26(b)(16)(iii)]. Within the study area, most MS4s are designated because they are located adjacent to beaches that are monitored as a result of AB 411 (see discussion in Regulatory Overview), are an ASBS, or are a flood control district.

Requirements for new non-traditional MS4s include: eliminating dry weather flows, prohibiting illicit discharges and illegal connections, responding to spills, etc. USEPA's Stormwater Phase II Rule establishes an MS4 stormwater management program that is intended to improve the Nation's waterways by reducing the quantity of pollutants that stormwater picks up and carries into storm sewer systems during storm events (USEPA 2000). MS4s must establish an education/outreach program, illicit discharge detection and elimination training, and public participation program (MS4 2013).

Vessel Discharges

There are two primary issues of concern associated with discharges: cruise ship discharge and other vessel (shipping, fishing, etc.) discharge. Cruise ship discharges are addressed separately below. This section addresses the types of discharge from commercial, recreational and government vessels that transit through and operate in the study area. During normal operations, vessels produce a multitude of wastes, which when discharged into the marine environment, can impact the water quality. Information about vessel operations in the study area is in Section 4.4 (Commercial Fishing and Aquaculture) Section 4.6 (Socio-economic Resources, Human Uses, and Environmental Justice, under Recreational Boating), Section 4.8 (Marine Transportation) and Section 4.9 (Homeland Security and Military Uses). Potential discharges from these types of vessels include sewage, graywater, bilge water, ballast water, hazardous wastes, and solid wastes. These discharges are discussed below.

Sewage

Sewage (also referred to as black water) includes vessel sewage and other wastewater. Sewage from ships is generally more concentrated than sewage from land-based sources, as it is diluted with less water when flushed. Sewage discharge may contain bacteria or viruses that cause disease in humans and other wildlife. High concentrations of nutrients in sewage, namely nitrogen and phosphorous, can lead to eutrophication, the process where an aquatic environment becomes rich in dissolved nutrients, causing excessive growth and decomposition of oxygen-depleting plant life, and resulting in injury or death to other organisms.

A Marine Sanitation Device (MSD) is equipment on board a vessel designed to receive, retain, treat, control, or discharge sewage. Chemicals and deodorants often used in MSDs, including chlorine, ammonia, or formaldehyde, can also impact water quality. Section 312 of the CWA (33 U.S.C. § 1322) requires the use of MSDs for all vessels within 3 miles (2.6 nm) of the coastline if vessels have an installed toilet. The USEPA and U.S. Coast Guard (USCG) jointly regulate MSDs under CWA section 312.

Vessels 20 meters (65 feet) and under may use a Type I, II, or III MSD. Vessels over 65 feet in length must have a Type II or Type III MSD (33 CFR 159.7). Smaller vessels may have MSDs (but are not required to), or may have portable toilets, portable sewage receptacles, or no toilet facilities. Type I MSDs rely on maceration and disinfection for treatment of the waste prior to its discharge into the water. Type II MSDs provide an advanced form of the same type of treatment used by Type I devices and discharge wastes with lower fecal coliform counts and reduced suspended solids. A Type II MSD must meet a water quality standard of 200 fecal coliform per 100 ml of water, for sewage treatment. Type III MSDs, commonly called holding tanks, flush sewage from the marine head into a tank containing deodorizers and other chemicals (USEPA 2013b). The contents of the holding tank are stored until the contents can be properly disposed of, at a shore-side pump-out facility or dump station, into a mobile pumpout unit, or into ocean

waters where sewage discharge is permitted. Type III MSDs can be equipped with a discharge option, usually called a Y-valve, which allows the boater to direct the sewage from the head either into the holding tank or directly overboard. There are no known public pump-out facilities within the proposed expansion area, but there is a pump-out facility in Bodega Harbor, adjacent to the expansion area. At least two mobile pumpout companies indicate they service areas of Sonoma County; schedule and cost may depend upon such factors as the location of the vessel to be pumped out and if other nearby customers order the pumpout service. There are dump stations adjacent to the expansion area at Manchester State Park, Anchor Bay Campground (private), Gualala Point Regional Park, and Stillwater Cove Regional Park. There are also dump stations near the expansion area at Doran Regional Park and Westside Regional Park.

Pursuant to Section 312(f)(4)(A) of the CWA (33 U.S.C. § 1322), USEPA established a No Discharge Zone (NDZ) for marine waters within 3 miles of the coastline in the State of California for sewage discharges from: all large passenger vessels of 300 gross tons or greater; and from large oceangoing vessels of 300 gross tons or greater with available holding tank capacity or containing sewage generated while the vessel was outside of the marine waters of the State of California (USEPA 2012). NDZs are designated bodies of water where the discharge of treated and untreated sewage from vessels is prohibited. This action was taken in response to an application from the California State Water Resources Control Board requesting establishment of this NDZ. Based on the State's application, USEPA determined that the protection and enhancement of the quality of California's marine waters requires the prohibition of sewage discharges from these two classes of large vessels in the State waters of California from the Oregon border to the Mexican border, including the waters extending 3 miles from the Farallon Islands (USEPA 2012). The final rule went into effect March 28, 2012 (40 CFR Part 140). This means that in the study area there is enhanced water quality protection from vessel discharges within California State waters, but vessels can discharge sewage, treated or untreated, outside of 3 miles.

Graywater

Graywater from vessels includes wastewater from showers and galleys. Pollutants in graywater include suspended solids, oil, grease, ammonia, nitrogen, phosphates, copper, lead, mercury, nickel, silver and zinc, detergents, cleaners, oil and grease, metals, pesticides, and medical and dental wastes. USEPA regulates incidental discharges from the normal operation of vessels, excluding discharges from military vessels or recreational vessels, through the NPDES vessels program. Incidental discharges from the normal operation of vessels include ballast water, bilge water, graywater and anti-foulant paints (and their leachate). These discharges may result in negative environmental impacts via the addition of traditional pollutants or, in some cases, by contributing to the spread of aquatic invasive species (USEPA 2013c). The NPDES vessels program is administered through the VGP. Waters of the study area in the territorial sea (within 3 miles of the coastline), but not waters seaward of the territorial sea are subject to the VGP (USEPA 2013d). On March 28, 2013, USEPA issued the 2013 VGP, effective beginning December 19, 2013, to authorize discharges incidental to the normal discharge of operations of commercial vessels. Discharge of graywater in the study area is addressed in the following way under the VGP:

- For vessels greater than 400 gross tons that regularly travel more than one nm from shore that have the capacity to store graywater for a sufficient period, graywater must be discharged greater than one nm (1.15 statute miles) from shore while the vessel is underway.

- The California provisions for the VGP prohibits graywater discharges from oceangoing vessels of 300 gross tons or more if they have sufficient holding capacity; any co-mingling of sewage and graywater are considered graywater for purposes of these conditions as stated in section 2.2.25 of the VGP.
- Vessels that do not regularly travel more than one nm from shore and without storage capacity shall minimize the discharge of graywater and, provided the vessel has available graywater storage capacity, must dispose of graywater onshore if appropriate facilities are available and such disposal is economically practicable and achievable.
- The introduction of kitchen oils to the graywater system in non-harmful quantities must be minimized. Kitchen oil in harmful quantities is prohibited. Vessel owners/operators must use phosphate-free and minimally toxic soaps and detergents. Soaps and detergents must be free from toxic or bioaccumulative compounds and not lead to extreme shifts in receiving water pH.

Bilge Water

Bilge water includes fuel, oil, wastewater, other chemicals, and materials that collect at the bottom of the ship's hull with fresh and seawater. Under the Oil Pollution Act and the CWA, vessels are prohibited from releasing any discharge with an oil content of greater than fifteen parts of oil per one million parts water (ppm) within 14 miles (12 nm) of land. Beyond 14 miles, discharges with oil content greater than 100 ppm are prohibited. Under the California Clean Coast Act, cruise ships and other ships of 300 gross tons or more may not release oily bilge water in the marine waters of the State (3 nm from shore). Vessels are prohibited from discharging bilge water with an oil content greater than 15 ppm within 12 nm of land and, beyond 12 nm of land, greater than 100 ppm.

Ballast Water

Large vessels can take on millions of gallons of ballast water, often from coastal waters in one location, and discharge it, often at another location, for the purpose of stability. Ballast operations have led to the introduction of invasive species, which are considered a threat to water quality and can disrupt marine ecosystems. Ballast water appropriation and discharge within State waters is regulated by the California Marine Invasive Species Act, authorized through AB 433, signed by the Governor in 2003; the California Coastal Ecosystems Protection Act authorized by SB 497 signed by the Governor in 2005; California Code of Regulations, Title 2, Division 3, Chapter 1, Article 4.6, "Ballast Water Regulations for Vessels Arriving at California Ports or Places after Departing from Ports or Places Within the Pacific Coast Region" (2013) and the VGP. The Marine Invasive Species Act and the California Code of Regulations Title 2, Division 3, Chapter 1, Article 4.6, contain specific ballast water discharge requirements applicable to vessels. The Coastal Ecosystem Protection Act requires the State to adopt ballast water performance standards, sets specific deadlines for the removal of different types of species from ballast water. The California Marine Invasive Species Program, administered by the CSLC, is charged with preventing or minimizing the introduction of nonindigenous species to California Waters from vessels over 300 gross registered tons, capable of carrying ballast water. Throughout the study area, discharges of ballast water must also comply with applicable USCG regulations (33 CFR Part 151). All discharges of ballast water may not contain oil, noxious liquid substances, or hazardous substances in a manner prohibited by U.S. laws, including section 311 of the CWA.

Hazardous Materials

Various hazardous materials are used and hazardous wastes are generated during the course of vessel operations. For example, hazardous wastes generated on cruise ships include dry cleaning and photo processing chemicals, paints and solvents, batteries, and fluorescent light bulbs containing mercury. These substances can be toxic or carcinogenic to marine life. The Resource Conservation and Recovery Act (RCRA) requires that vessels that generate or transport hazardous waste offload these wastes at treatment or disposal facilities or outside of the territorial waters of the U.S.

Solid Wastes

Solid wastes generated by vessels include food waste, cans, glass, wood, cardboard, paper, and plastic. The discharge of solid wastes is regulated under Act to Prevent Pollution from Ships (APPS) and CWA. The Marine Plastic Pollution Research and Control Act (implementing the International Convention for the Prevention of Pollution from Ships [MARPOL]) is an international agreement regulating the disposal of plastics and garbage pursuant to Annex V.¹³ Under these regulations, the disposal of plastics is prohibited in any waters, and floating dunnage¹⁴ and other materials are prohibited in navigable water within 12 nm from land. Other garbage, such as food waste, paper and metal, can be disposed of beyond 12 nm from shore. Garbage ground to pieces under an inch can be discharged beyond 3 nm from shore.

Cruise Ship Discharges

Cruise ships generate domestic wastewater and other by-products during the course of their daily operations. The main pollutants generated by a cruise ship include sewage, graywater, bilge water, ballast water, hazardous waste, and solid waste. Each of these pollutants is defined above in the vessel discharges discussion. The most common domestic wastes are sewage, or “black water,” which is human waste from toilets and urinals, plus medical facility sink drainage, and “graywater,” which is typically galley, laundry, bath/shower, and sink drainage. Discharges from sewage and graywater are discussed below.

The volume of discharges from large cruise ships is of particular concern. Cruise ships regularly transit the study area and embark passengers at ports within the San Francisco and Monterey bays. Between 2008 and 2010, a yearly average of over 100 cruise ships transited in and out of San Francisco Bay, many headed north to destinations in the Pacific Northwest, Canada and Alaska. Cruise ships may also head to Hawaii and to ports south in California, Mexico (Port of San Francisco 2013), and beyond, embarking and disembarking passengers at each port. Although partly constrained by the lack of local docking facilities, cruise ship visits to the area are likely to continue to grow as the fleet shifts from international to more domestic cruises, and due to a new cruise ship docking facility in San Francisco Bay. The terminal is expected to receive its first cruise ship in 2014.

¹³ The MARPOL Convention sought to eliminate and reduce the amount of garbage being dumped into the sea from ships. Under Annex V of the Convention, garbage includes all kinds of food, domestic and operational waste, excluding fresh fish, generated during the normal operation of the vessel and liable to be disposed of continuously or periodically. Annex V specifies distances from shore and the manner in which they may be disposed. Extensive amendments to Annex V entered into force on 1 January 2013. The revised Annex V prohibits the discharge of all garbage into the sea, except as provided otherwise, under specific circumstances. The Annex also obliges Governments to ensure the provision of facilities at ports and terminals for the reception of garbage (IMO 2013).

¹⁴ Loose packing material used to protect a ship's cargo from damage during transport.

Large cruise ships can carry thousands of passengers and can generate several million gallons of waste per day. The typical storage capacities for cruise ships are as follows: graywater – 500-2100 tons, black water – 400-1,000 tons, and bilge water – 60-300 tons. Only recently cruise ship discharges have been prohibited within 3 miles of California’s coast. This does not extend protection to federal waters outside of California State water boundaries.

Graywater discharges from cruise ships in the study area historically have been excluded from CWA permitting requirements through regulations at 40 CFR 122.3(a). However, a court order vacated that exclusion as of December 19, 2008, and as a result, except for the Great Lakes, graywater discharges into waters of the U.S. from cruise ships 79 feet or longer in length are subject to NPDES permitting (USEPA 2008) through the VGP. Under the 2013 VGP, graywater discharge from cruise ships is prohibited in State waters if they have sufficient holding capacity. Any co-mingling of sewage and graywater will be considered graywater for purposes of these conditions as stated in section 2.2.25 of the VGP. Graywater discharges from large cruise ships (500 or more passengers) and medium cruise ships (100-499 people) must be held until outside 3 miles from shore unless they meet specified effluent limits; discharge of untreated graywater within 3 miles from shore from medium cruise ships is not authorized, unless they are unable to voyage more than one nm from shore and do not have the capacity to meet specified standards — then they must hold the graywater unless the vessel is underway and sailing at six knots or more outside marine sanctuary waters subject to the VGP.

Spill Incidents

There is a persistent threat to water quality from an accidental spill from a vessel within or outside the study area. Offshore spills, particularly near high-use shipping lanes, have the potential to severely impair water quality. In the event of an oil or toxic chemical spill, the impact on the sanctuaries would depend on the spill location, the type of material spilled, and the wind and sea conditions. Oil and other chemical spills and vessel groundings can pose a serious threat to nearshore and estuarine communities as well as archaeological resources. Spilled oil can smother benthic biota and foul or poison organisms and fish breeding habitat. Oil buried by sand or gravel can have long-term chronic effects by slowly and continuously releasing toxic compounds when exposed to wave action.

Spill incidents could also impact pelagic biota such as krill and forage fish as well as larval fish and crustaceans, especially if response operations involve the use of chemical dispersants. The impact of surface and subsurface oil on water quality and significance of the resulting cascading ecosystem effects is particularly of concern in the upwelling-dominated study area.

Dredge Disposal

Disposing of dredged material in the ocean adversely impacts the marine environment by increasing water column turbidity; however, there are currently no dredge disposal sites or areas being dredged within the proposed expansion area. The closest disposal site is the San Francisco Deep Ocean Disposal Site (SF-DODS), which is located approximately 25 nm west of the Farallon Islands, and approximately 10 nm west of the western boundary of GFNMS. This site is used for the disposal of uncontaminated material generated during dredging activities in the San Francisco Bay and Bodega Bay. Through the 2007 disposal year, almost 16 million cubic yards of dredged material have been diverted to the SF-DODS from traditional in-Bay sites, reducing risks of disposal-related impacts within those sensitive waters, and that

reduction of risk has been accomplished without causing any known significant impacts on the ocean (Germano & Associates, Inc. 2010). Dredging occurs in the vicinity of Spud Point Marina breakwater in the northwestern part of Bodega Harbor, adjacent to the study area. The work consists of maintenance dredging, when needed, of approximately 143,000 cubic yards of materials for the Bodega harbor, channel, and USCG Station. The dredged materials are disposed at SF-DODS and/or SF-8, both of which are outside of the study area.

4.2.2 Regulatory Overview

The existing regulatory environment applicable to the proposed expansion area is summarized in the following paragraphs, by physical resource area (i.e., air quality and climate, geology and oceanography and water quality).

Air Quality and Climate

Federal and State air quality standards are referenced in Section 4.2.1 (Regional Overview of Affected Environment), in the discussion of air basins.

Federal Clean Air Act

Section 176(c) of the Federal Clean Air Act (FCAA) contains provisions that apply specifically to federal agency actions, including actions that receive federal funding. This section of the FCAA requires federal agencies to ensure that their actions are consistent with the FCAA and with applicable State air quality management plans.

The USEPA's general conformity rule applies to federal actions occurring in nonattainment or in certain designated maintenance areas when the total direct and indirect emissions of nonattainment pollutants (or their precursors) exceed specified thresholds. The emission thresholds that trigger requirements of the conformity rule are called de minimis levels. Emissions associated with stationary sources that are subject to permit programs are incorporated into the State implementation plan and are not counted against the de minimis threshold. The federal agency providing the funding for the proposed action is responsible for submitting conformity determination documentation to the USEPA. The proposed action does not include stationary or mobile sources of emissions and would not result in emissions that exceed the thresholds; therefore, the proposed action is not subject to a formal conformity determination.

Annex VI Prevention of Air Pollution from Ships

Annex VI of MARPOL entered into force on May 19, 2005. It sets limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances; designated emission control areas set more stringent standards for SO_x, NO_x and particulate matter. In 2011, the International Maritime Organization (IMO) adopted more stringent measures to significantly reduce the amount of greenhouse gas emissions from ships; these measures went into effect on January 1, 2013 (IMO 2013).

Geology and Oceanography

See Section 4.7 (Offshore Energy) for specific regulations regarding oil, gas and alternative energy development.

Submerged Lands Act, 43 U.S.C. § 1301 et seq.

Under the Submerged Lands Act (SLA) the location of energy and mineral resources determines whether or not they fall under state control. The SLA granted states title to the natural resources located within 3 miles of their coastline. For purposes of the Submerged Lands Act, the term “natural resources” includes oil, gas and all other minerals.

Outer Continental Shelf Lands Act, 43 U.S.C. § 1331 et seq.

The Outer Continental Shelf Lands Act (OCSLA), established federal jurisdiction over submerged lands on the OCS seaward of state boundaries. Under the OCSLA, the Secretary of the Interior is responsible for the administration of mineral exploration and development of the OCS. The OCSLA provides guidelines for implementing an OCS oil and gas exploration and development program, and authorities for ensuring that such activities are safe and environmentally sound.

Deep Seabed Hard Mineral Resources Act, 30 U.S.C. § 1401 et seq.

The Deep Seabed Hard Mineral Resource Act provides regulations for developing deep seabed hard minerals, requires consideration of environmental impacts prior to issuance of mineral development permits, and requires monitoring of environmental impacts associated with any mineral development activities. With regard to minerals on the deep seabed, seabed nodules contain nickel, copper, cobalt and manganese — minerals important to many industrial uses. No commercial deep seabed mining is currently conducted, nor is such activity anticipated in the near future.

Water Quality

Marine water quality is regulated by numerous statutes and government agencies. These serve to protect the marine environment from the various point and nonpoint sources of marine pollution. Regulations applicable to the various types of cruise ship discharges are described above in the affected environment.

Rivers and Harbors Appropriations Act of 1899, 33 U.S.C. §§ 401, 403

Section 9 of the Federal Rivers and Harbors Appropriations Act of 1899 (RHA) prohibits the construction of any dam or dike across any navigable water of the United States in the absence of Congressional consent and approval of the plans by the Chief of Engineers and the Secretary of the Army.

Section 10 prohibits the unauthorized obstruction or alteration of any navigable water. Navigable waters under the RHA are those “subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce” (33 CFR 3294). Typical activities requiring Section 10 permits are construction of piers, wharves, bulkheads, marinas, ramps, floats, intake structures, cable or pipeline crossings, and dredging and excavation.

The U.S. Army Corps of Engineers (USACE) acts in accordance with the provisions of the Rivers and Harbors Act, which regulates placement of structures or other work in addition to fill in “navigable waters,” and the CWA (Section 404), which governs fill in “waters of the United States,” including wetlands. A USACE permit is required if a project would place structures within navigable waters or if it would result in altering waters of the U.S. below the ordinary high water mark in nontidal waters. The USACE does not issue these types of permits in cases where the USACE itself is the lead agency; instead it evaluates the project to determine compliance and acceptability.

Federal Water Pollution Control Act, commonly known as the Clean Water Act, 33 U.S.C. § 1251 et seq.

The CWA was passed in 1972 by Congress, and amended in 1987. Point source discharges are illegal under the Clean Water Act unless authorized by an NPDES permit. Under CWA Section 402 (33 U.S.C. § 1342), any discharge of a pollutant from a point source (e.g., a municipal or industrial facility) to the navigable waters of the United States or beyond must obtain an NPDES permit, which requires compliance with technology- and water quality–based treatment standards. Two sections of the CWA deal specifically with discharges to marine and ocean waters.

Under CWA Section 403 (33 U.S.C. § 1343), any discharge to the territorial seas (3 miles) or beyond also must comply with the Ocean Discharge Criteria established under CWA Section 403.

CWA Section 312 (33 U.S.C. § 1322) contains regulations protecting human health and the aquatic environment from disease-causing microorganisms that may be present in sewage from boats. Pursuant to Section 312 of the CWA, all recreational boats with installed toilet facilities must have an operable MSD on board. All installed MSDs must be USCG-certified. USCG-certified devices are so labeled except for some holding tanks, which are certified by definition under Section 312 of the CWA (33 U.S.C. § 1322).

Title I of the Marine Protection, Research, and Sanctuaries Act, also known as the Ocean Dumping Act, 33 U.S.C. §§ 1401-1445

The Marine Protection, Research, and Sanctuaries Act (MPRSA) regulates the dumping of wastes into marine waters. It is the primary federal environmental statute governing transportation of dredged material for the purpose of disposal into ocean waters, while CWA Section 404 governs the discharge of dredged or fill material into waters of the U.S. In 1983, a global ban on the dumping of radioactive wastes was implemented. The MPRSA and the CWA regulate materials that are disposed of into the marine environment, and only sediments determined to be nontoxic by USEPA standards may be disposed of into the marine environment. The USEPA and the USACE share responsibility for managing the disposal of dredged materials (Chin and Ota 2001).

Oil Pollution Control Act, 33 U.S.C. § 2701 et seq.

The Oil Pollution Control Act of 1990 requires extensive planning for oil spills from tank vessels and onshore and offshore facilities and places strict liability on parties responsible for oil spills. See Section 4.8 (Marine Transportation) for more information.

Act to Prevent Pollution from Ships, 33 U.S.C. § 1901 et seq.

The discharge of solid wastes is regulated under the APPS, as amended by the Marine Plastic Pollution Research and Control Act of 1987, and the CWA. The APPS regulates the disposal of plastics and garbage for the United States Annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78). Under these regulations the disposal of plastics is prohibited in all waters, and other garbage, including paper, glass, rags, metal, and similar materials, is prohibited within 14 miles (12 nm) from shore (unless macerated).

Coastal Zone Management Act, 16 U.S.C. §§ 1451-1466

The Coastal Zone Management Act (CZMA) provides incentives for coastal states to develop and implement coastal area management programs. It is significant with regards to water pollution abatement, particularly concerning nonpoint source pollution.

Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9675

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) addresses cleanup of hazardous substances and mandates liability for environmental cleanup on those whose actions cause release into the environment. In conjunction with the CWA, it requires preparation of a National Contingency Plan for responding to oil or hazardous substances release. The Comprehensive Environmental Response, Compensation, and Liability System (CERCLIS) database contains information on hazardous waste sites, potential hazardous waste sites, and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL. CERCLIS contains information on sites located within the shoreline counties of the study area. While there are no sites on the coast in Sonoma and Mendocino Counties, there are 26 sites in Sonoma County and 6 in Mendocino County.

Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901-6992k

The RCRA addresses hazardous waste management, establishing duties and responsibilities for hazardous waste generators, transporters, handlers, and disposers.

Porter-Cologne Water Quality Control Act, California Water Code §§ 13000-14958

The Porter-Cologne Water Quality Control Act contains provisions for enforcing water quality standards through issuance of Waste Discharge Requirements. Pursuant to the act, the SWRCB has the primary responsibility to protect California's coastal and ocean water quality. SWRCB has been given the authority by the USEPA to administer the NPDES program for California. The Regional Water Quality Control Boards, in coordination with the SWRCB, issue both State waste discharge requirements and NPDES permits to individual dischargers. Dischargers are required to establish self-monitoring programs for their discharges and to submit compliance reports to Regional Water Quality Control Boards. The SWRCB has established regulations to implement these measures through water quality control plans, including the California Ocean Plan (Ocean Plan), the Regional Water Quality Control Plans (Basin Plans), and the Thermal Water Quality Control Plan (California Ocean Resources Management Program 1995).

California Health and Safety Code § 115880 et seq.

Originally authorized under AB 411 (Wayne 1997), California has established minimum standards for the sanitation of public beaches, including: 1) requiring the testing of the waters adjacent to all public beaches for microbiological contaminants; 2) establishing protective minimum standards for total coliform, fecal coliform, and enterococci bacteria, or for other microbiological indicators and (3) requiring that the waters adjacent to public beaches are tested for total coliform, fecal coliform, and enterococci bacteria, or for other microbiological indicators if appropriate. Since 2012, testing on beaches that are visited by more than 50,000 people annually and are located on an area adjacent to a storm drain that flows in the summer is required on a weekly basis from April 1 to October 31, inclusive, of each year.

California Coastal Act, Cal. Pub. Res. Code § 30000 et seq.

The California Coastal Act of 1976 mandates protections for terrestrial and marine habitat through its policies on visual resources, land development, agriculture, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, power plants, ports, and public works. The California Coastal Commission administers various programs, including Local Coastal Programs and the Water Quality Program, which facilitates the interagency Nonpoint Source Pollution Control Program.

California Marine Invasive Species Act, Cal. Pub. Res. Code § 71200 et seq.

The California Marine Invasive Species Act of 2003 applies to all vessels, United States and foreign, carrying, or capable of carrying, ballast water into the coastal waters of the State after operating outside of the coastal waters of the State, except vessel of the armed forces or a foreign vessel merely traversing the territorial sea of the United States and not entering or departing a United States port, or not navigating the internal waters of the United States, and that does not discharge ballast water into the waters of the State, or into waters that may impact waters of the State. It requires mid-ocean exchange or retention of ballast water for vessels coming from outside the EEZ and requires vessels coming from other west coast ports to minimize ballast water discharge. Record-keeping and other compliance measures apply to all vessels entering California waters.

California Ballast Water Regulations, CCR, Title 2, Division 3, Chapter 1, Article 4.6 et seq.

The master, operator, or person in charge of vessels over 300 gross registered tons capable of carrying ballast water arriving at a California port or place carrying ballast water from another port or place within the Pacific Coast must employ at least one of the following ballast water management practices: (1) exchange the vessel's ballast water in near-coastal waters (more than 50 nm from land and at least 657 feet deep), before entering the waters of the State, if that ballast water has been taken on in a port or place within the Pacific Coast region; (2) retain all ballast water on board the vessel; (3) use an alternative, environmentally sound method of ballast water management that, before the vessel begins the voyage, has been approved by the CSLC or the USCG as being at least as effective as exchange, using mid-ocean waters, in removing or killing nonindigenous species; (4) discharge the ballast water to a reception facility approved by the commission; or (5) under extraordinary circumstances where compliance with the four options above is not practicable, perform a ballast water exchange within an area agreed to by the CSLC in consultation with the USCG. "Pacific Coast Region" is defined in Article 4.6 as all estuarine and ocean waters within 200 nm of land or less than 2,000 meters (6,560 feet, 1,093 fathoms) deep, and rivers, lakes or other water bodies navigably connected to the ocean on the Pacific Coast of North America east of 154 degrees west longitude and north of 25 degrees north latitude, exclusive of the Gulf of California. Additional information on ballast water management is provided in Section 4.8 (Marine Transportation).

California Clean Coast Act, Cal. Pub. Res. Code § 72400 et seq.

The California Clean Coast Act, which became effective on January 1, 2006, prohibits the release from large passenger vessels (cruise ships) and other oceangoing ships (300 gross tons or more) of hazardous waste, oily bilge water, other waste, and sewage sludge into the marine waters of the State and marine sanctuaries and sets up notification protocols for release of these substances into State waters or waters of a national marine sanctuary. The Clean Coast Act also prohibits the release of graywater from cruise ships and oceangoing ships with sufficient holding capacity into the marine waters of the State. Furthermore,

the Clean Coast Act requires the State Water Resources Control Board to request the appropriate federal agencies to prohibit the release of wastes from cruise ships and oceangoing ships into State marine waters and the four national marine sanctuaries in California. The Act is more stringent than federal regulation of cruise ships and also provides the strongest State protections from cruise ship pollution in the United States.

4.2.3 Impact Assessment Methodology

The overall methodology, including data sources and assumptions, used to conduct the physical resources impact evaluation is consistent with the NOAA NEPA guidelines (NAO 216-6).

Air Quality

Criteria to determine the significance of air quality impacts are based on federal, State, and local air pollution standards and regulations. Impacts are considered to be significant if project emissions would result in the following:

- Increase ambient pollutant levels from an attainment or nonattainment-transition status to nonattainment under the NAAQS or California Ambient Air Quality Standards;
- Exceed the thresholds the regional air agencies use for determination of significance for California Environmental Quality Act (CEQA) purposes (thresholds are based on the amount of emissions projected to be generated by a project and are expressed in terms of either pounds per day or tons per quarter); or

For the purposes of this analysis, major factors considered in determining whether an alternative would have a significant impact on air quality include the following:

- The amount of net increase in emissions per year of criteria pollutants within a given air basin or offshore sanctuary (the Clean Air Act sets a threshold of 91 metric tons [100 tons] per year for nonattainment areas);
- Whether relatively high emissions would occur on a continuing basis for periods longer than the timeframe of relevant ambient air quality standards (e.g., 8-hour periods for ozone precursors; 3-hour and 24-hour periods for sulfur oxides; 24-hour periods for PM₁₀);
- Whether emissions of precursors to ozone or other secondary pollutants would occur in such quantities and at such locations as to have a reasonable potential to cause or contribute to a violation of federal or State ambient air quality standards; or
- Whether emissions of hazardous air pollutants could exceed State standards or other hazardous air pollutant exposure guidelines at locations accessible to the general public.

Pursuant to the above criteria, substantive adverse air quality impacts were not identified for the proposed action. Therefore, regional and State thresholds regarding air emission quantities are not discussed in the impacts section since the proposed and alternative actions will not result in substantive increases in daily, monthly, or annual emission volumes.

Geology and Oceanography

Impacts on the geological and oceanographic resources are considered to be significant if the proposed action results in any of the following:

- Allows for exploitation of geologic resources inconsistent with the purposes and policies of the NMSA and its implementing regulations;
- Degrades the physical structure of any geologic resource that is measurably different from pre-existing conditions; or
- Alters any oceanographic process, such as sediment transport, that is measurably different from pre-existing conditions.

The methodology used to conduct the geological and oceanographic impact evaluation was to consider each of the proposed actions individually and to assess any potential impacts on these resources.

Water Quality

Criteria to determine the significance of water quality impacts are based on federal, State, and local water quality standards and regulations. Impacts are considered to be significant if a proposed action would:

- Alter the bacterial, physical, or chemical characteristics of near-shore ocean waters (not including enclosed bays or estuaries) so that they exceed effluent limitations established under the California Ocean Plan;
- Alter the bacterial, physical, or chemical characteristics of bay or estuary waters so that they violate requirements or exceed effluent limitations established by the Basin Plans for the North Coast and the San Francisco Bay Regional Water Quality Control Board;
- Result in ocean discharges not allowed for by a NPDES permit, or which do not meet discharge criteria established under the CWA;
- Increase the discharge or deposition of unauthorized waste into the sanctuary or in an area outside the sanctuary that could migrate into the sanctuary and affect its resources (including onshore urban or agricultural runoff);
- Increase the likelihood of exposing the environment to any hazardous conditions through release or disposal of oil, fuel, or hazardous substances; or
- Conflict with guidelines provided for by the Nonpoint Source Pollution Control Program's Management Measures.

The methodology used to determine whether a proposed or alternative action would have a significant impact on water quality is as follows:

- Review and evaluate existing and past baseline activities to identify the action's potential to impact water quality;

- Review and evaluate each proposed action and alternative to identify the action's potential to increase marine pollution or otherwise impact water quality within the sanctuaries; and
- Assess the compliance of each proposed action with applicable federal, State, or local water quality regulations, guidelines, and pollution prevention measures.

4.2.4 Environmental Consequences

Overall, the proposed expansion of the national marine sanctuary system would result in beneficial effects on physical resources. The following discussion addresses the proposed and alternative actions and individual components (e.g. regulations) of these actions that would contribute to a potential impact. Components of the proposed action or alternatives that do not affect physical resources are not discussed in this section.

Proposed Action – Targeted Regulations

The proposed prohibitions related to discharges, oil and gas development, submerged land disturbance and vessel desertion would all help reduce or eliminate the potential for physical resource impacts that may be associated with activities currently occurring in the expansion area or potentially allowed in the future, and would have an overall beneficial impact on the offshore physical environment. The regulations would reduce the potential for pollution discharge through these various prohibitions. Other regulations would have no impact or would have a negligible effect on air quality, geology, oceanography and water quality.

Air Quality/Climate Change

The proposed sanctuary expansion would have no discernible adverse impact on air quality or climate change as it would have negligible effects on vessel traffic, which is the primary source of air pollutants in the study area.

Implementing the proposed discharge regulations is expected to have a negligible beneficial impact on air quality within the sanctuaries. Discharge regulations could slightly affect how current activities within the sanctuary are conducted and could reduce the amount of discharges from marine vessels, including discharges of liquid or solid pollutants that in-turn can generate air pollutant emissions. If there is a significant reduction in oily wastes from bilges, ballast water or wastes from meals on board vessels, and raw sewage from MSDs, the amount of petrochemicals and other chemicals and compounds that could vaporize and become airborne may be reduced. This could indirectly improve air quality within the sanctuaries by reducing the amount of air pollutants that occur in the expansion area. However, the degree to which this beneficial effect may occur is not known.

One potential concern associated with expanding the sanctuaries is that vessels may need to travel farther to move outside the sanctuary to discharge materials that would be prohibited within the sanctuary boundaries. The additional travel time, if any, could increase the amount of air emissions from vessel engines. However, given the proposed exemption for clean graywater (that would apply to both the existing sanctuary and proposed expansion area) and existing federal and State discharge requirements, the incremental increase in potential travel time would not represent a substantial increase in air emissions. Most large vessels transit through the area, rather than spending substantial amounts of time in the existing or pro-

posed expansion area. These types of vessels would not need to make substantial detours to discharge materials outside of sanctuary waters. Furthermore, Annex VI of MARPOL requires use of energy efficient and low emission engines in marine vessels, which reduces overall emissions. The overall effect on air quality would be minor and less than significant.

The proposed regulations on cruise ship discharges within the expansion area are expected to provide a minor beneficial impact on air quality within the sanctuaries. Though the regulation does not address air pollution and engine exhaust directly, stricter regulations that prohibit cruise ships from discharging liquid and solid wastes into the expansion area are expected to reduce the overall amount of sewage, graywater, blackwater, and other oily and hazardous wastes into the sanctuary, which could become airborne. Reducing the overall amount of discharged wastes would reduce the possibility that these wastes could vaporize and degrade the overall air quality. Therefore, this regulation would have slight, though unknown, beneficial impacts on air quality.

Implementation of the existing sanctuary regulation that prohibits marine vessel owners from deserting vessels adrift, at anchor, or aground in the expansion area could indirectly have a slight beneficial impact on local air quality. When a vessel is deserted, there is a risk of it grounding on the shoreline, breaking apart, and discharging harmful matter (e.g., motor oil) into the marine environment, which could include emissions into the air basin. With the desertion prohibition, the likelihood of these occurrences would be reduced. The proposed action also includes a provision from the existing regulations that would prohibit leaving harmful matter aboard a grounded or adrift and unattended vessel. This prohibition could provide further air quality benefits by reducing the potential for discharge of oil and fuel and associated pollutant emissions, which can negatively impact air quality. This proposed prohibition would result in a decrease in the amount of spilled substances, including those that could become airborne such as oily and hazardous wastes, which would have a slightly beneficial impact on local air quality.

Geology and Oceanography

None of the proposed regulations would have an adverse effect on geology or oceanography. Minor beneficial effects would occur as a result of prohibiting disturbance and construction on the seabed.

Water Quality

The proposed regulations would prohibit discharging within the sanctuary, with certain exceptions (e.g., clean graywater), and would also prohibit discharging or depositing any material or other matter from beyond the boundary of the sanctuary that subsequently enters the sanctuary and injures a sanctuary resource or quality. These two regulations would benefit water quality in the expansion area by reducing the amount of pollutants that enter the water. In addition, the proposed action would help reduce or eliminate potentially hazardous pollutants such as oil, sewage and other harmful chemicals from entering the sanctuaries and potentially causing injury to marine resources or qualities. Potential upland sources of pollution include municipal wastewater outfalls, industrial outfalls, surface runoff (nonpoint source pollution), and oil and hazardous materials spills. Some examples of marine based sources of pollution include discharges from transiting and wrecked ships, and underwater pipelines. This regulation would result in potential direct beneficial impacts on hazardous waste management and hazardous waste disposal, by discouraging practices that could result in hazardous or toxic discharges within the sanctuary boundaries.

In addition to the sanctuary regulations, the expansion area would be subject to federal regulation 33 CFR Part 151, which states that vessels equipped with ballast water tanks must avoid the discharge or uptake of ballast water in areas within, or that may directly affect, marine sanctuaries.

The proposed regulations would prohibit all oil and gas development within the existing and proposed sanctuary expansion area. There are no existing or planned oil and gas production facilities in the vicinity, but this prohibition would eliminate the potential for facilities to be installed within the study area and reduce risk of oil or gas spills or other hazardous materials being deposited into sanctuary waters. This would result in a beneficial impact on water quality in the expansion area.

As described in the air quality impacts subsection, the proposed regulations would prohibit vessels from being deserted in the expansion area and would prohibit leaving harmful matter (hazardous materials or wastes) aboard a deserted vessel. When a vessel is deserted there is a high risk of discharge of harmful matter (e.g., fuel, motor oil) into the marine environment. These regulations allow the sanctuary to take immediate corrective action to remove the deserted vessel and potentially reduce the amount of hazardous materials that enter the sanctuary. The regulations also allow the sanctuary to prosecute the responsible party, collect damages and restore the affected resources. Therefore, implementing these regulations would provide beneficial effects on water quality.

A proposed regulation that has potential to result in adverse impacts on water quality is the new authorization process for both CBNMS and GFNMS. Discharges otherwise prohibited by sanctuary regulations may be allowed via the authorization process in either the existing sanctuaries or proposed expansion area, if a proposed use or activity is approved by another federal, State or local agency. Existing sanctuary regulations do not include this provision and therefore no mechanism exists to allow prohibited uses, unless they qualify for a permit under very limited conditions. Compared to existing conditions, the authorization process could be perceived to allow additional uses and discharges in the existing sanctuary that have been prohibited in the past. This potential indirect impact would be adverse, but not significant, due to the fact that any proposed activity would be subject to approval from the sanctuary and the sanctuary would have the ability to impose conditions to protect sanctuary resources and qualities. Although the authorization process could be used in the expansion area, compared to existing conditions and applicable regulations, this component of the proposed action would not generally allow uses currently prohibited in the expansion area.

The proposed exemption for clean graywater discharges would allow such discharges in both CBNMS and GFNMS. This exemption would represent a change in the existing sanctuaries, where such discharges are currently prohibited. However, there are limitations on this type of discharge and discharges would be distributed throughout the entire sanctuary area. Therefore, the potential for adverse impacts on water quality in the existing sanctuaries would be minor and less than significant and would be offset by the overall beneficial effect of the proposed action's combination of prohibitions on most discharges in the expansion area.

No Action Alternative

The No Action alternative would be to continue to manage the expansion area as it is currently managed under federal and State laws. This would result in no additional impact on physical resources, but would not achieve the benefits of the proposed action.

Existing Regulations Alternative

The regulations relevant to discharges, vessel desertion and submerged lands protection in this alternative are similar to the proposed action and would have similar benefits as described for the proposed action. There is one difference in vessel discharges. The proposed action includes an exemption for clean graywater, however, the existing regulations alternative would not include this provision because it is not in the existing sanctuary regulations for either CBNMS or GFNMS. Therefore, there may be slightly more beneficial impacts for water resources under this alternative.

Another minor difference is that the regulations under this alternative would allow oil and gas pipelines in specific circumstances. If permitted, there would be a potential for hazardous materials discharge related to an oil spill from the pipeline in the event of a pipeline break. Such discharge could impact both air quality and water quality. However, oil and gas pipelines are allowed (with permits) under existing regulations in both the existing and proposed GFNMS boundaries. Therefore, there is no adverse impact compared to existing conditions. Furthermore, no oil or gas facilities are planned in the expansion area.

Implementation of existing regulations would not include the proposed action authorization process. Therefore, the existing regulations alternative may result in a slightly more beneficial impact on water quality than the proposed action due to the fact that there would be less potential for permitting or allowing otherwise prohibited uses under this alternative. It should be noted that the differences in beneficial impacts would be negligible.

Arena Cove Boundary Alternative

By including a larger area of the cove in the sanctuary boundaries, this alternative would have the potential for slightly increased benefits over the proposed action. The proposed vessel discharge and desertion regulations would apply to the entire harbor area, potentially further safeguarding against the discharge/disposal of wastes and other pollutants.

MPWC Zones Alternative

Impacts would be the same as described for the proposed action. Implementing the alternative MPWC zones would not materially change the impacts, compared to the proposed action.

4.3 Biological Resources

This section presents information on a variety of habitat types found in the study area with a broad treatment of biological communities associated with each habitat, a summary of marine flora, and discussion of specific wildlife resources including sections on fishes, marine mammals, birds, and invertebrates. This section also includes information on sensitive or special status species, and introduced species. The existing biological resources of the region are generally described, and a summary of federal, state, and local authorities pertaining to these resources is provided. The impact analysis presents the standards used to evaluate impacts on biological resources and addresses potential effects of the proposed action on these resources.

The study area for biological resources includes the existing CBNMS, GFNMS and the proposed expansion area for both sanctuaries.

4.3.1 Regional Overview of Affected Environment

Biological resources in the study area are described in several publications and additional information is available from a variety of sources. NOAA staff gathered this information for existing and future management efforts, to monitor conservation objectives, and as part of ongoing resource assessment and research. For a more detailed discussion on biological resources within GFNMS and CBNMS, please refer to the following documents: the updated draft management plans (DMPs), two biogeographic assessments (NOAA 2003 and 2007), the ecological linkages report (Airamé, et al. 2003), as well as the Sanctuary Condition Reports (ONMS 2010 and ONMS 2009, respectively). Website offerings with biological resources data include the website for the Sanctuary Integrated Monitoring Network (SIMoN) hosted by the Monterey Bay National Marine Sanctuary and resource characterizations on each sanctuary's website. In addition, Appendix G of this DEIS contains comprehensive lists of wildlife and plant species known to occur in the proposed expansion area. These lists can be considered as minimum species inventories. The updated draft management plan for each sanctuary also includes species lists that encompass both the existing and proposed sanctuary boundaries.

Some information on habitat suitability and species use of the study area is provided in the above-referenced biogeographic assessments and linkages report (NOAA 2003, NOAA 2007 and Airamé et al. 2003). The biogeographic assessments, which extend to Point Arena, address locally important species and certain special status species of invertebrates, fish, marine mammals, and birds. These assessments help determine species' use and abundance within the proposed expansion area.

The proposed expansion area of CBNMS covers offshore habitats including Bodega Canyon and GFNMS covers coastal and offshore habitats of northern California from Bodega Head, in Sonoma County, to Manchester State Beach, in Mendocino County. The study area includes unique geological and biological features but also shares many features with existing sanctuaries such as the Point Arena upwelling system, the influence of the California Current, a major eastern boundary current, and seasonal weather patterns.

The unique combination of oceanographic patterns and undersea topography create conditions in the study area that support a rich and diverse assemblage of marine species. This includes a wide array of temperate cold-water species with occasional influxes of temperate warm-water species from the south. The species diversity is directly related to local productivity, diversity of habitats and variable oceanic

conditions that are described in the following section, and the location of the study area within a broad biogeographic transition zone providing a gradient of environmental conditions in which the species composition changes from north to south.

As discussed in Section 4.2 (Physical Resources), the Point Arena region serves as an area that originates upwelled, nutrient-rich ocean waters, which are transported by wind driven currents to the existing sanctuaries over a period of five to seven days (see Figure 4.3-1) (Halle and Largier 2011). Upwelling may be widespread at times or localized at upwelling centers or “cells” (e.g., Point Arena). Upwelling offshore of Point Arena delivers deep, nutrient-rich cold water to the surface that supports high productivity along southern Mendocino and Sonoma coasts extending down to Point Reyes, Cordell Bank and the Gulf of the Farallones region. San Francisco Bay is another important source of nutrients and organic matter flowing into the Gulf of Farallones region. These nutrient rich waters support high concentrations of phytoplankton in the Cordell Bank and Gulf of the Farallones region, which in turn support zooplankton and higher trophic species such as whales, fish and birds. Seasonal streams and rivers such as Salmon Creek, Russian River, Gualala River and Garcia River are also important sources of nutrients and organic matter that support high productivity in the region.

Habitat Types

The study area is primarily in the ocean, but includes some aquatic (i.e. freshwater or brackish water), as well as terrestrial habitats along the coastline adjacent to the proposed expansion area. The study area contains a diversity of habitats, including coastal bluffs, estuaries and lagoons, intertidal, subtidal and nearshore waters, continental shelf and slope and offshore waters. The following discussion focuses on the habitats in and adjacent to the proposed expansion area.

Coastal Bluff Vegetation

Coastal bluff habitat occurs shoreward of the high tideline. Bluffs along the coast rise steeply from intertidal areas, and include vegetation growing from the higher high tide line to the bluff tops. These are harsh environments where plants must withstand strong winds with high salt content. Species within the coastal bluff vegetation are categorized according to three communities described by Holland (1986): northern foredune, central dune scrub, and northern coastal bluff scrub. Due to the prevalence of invasive nonnative species in this California habitat, much of the vegetation on the cliff top consists of nonnative plants. Upland from the coastal bluffs, areas of dense forest are interspersed with wave cut terraces, rolling grasslands and agricultural lands.

Estuaries and Lagoons

Estuaries and lagoons are very productive coastal ecosystems that play a key role as nursery habitat for many coastal invertebrates and fishes. They are also an important part of the Pacific Flyway, which hosts thousands of shorebirds and waterfowl on their migrations (Ramer 1991). Anadromous species such as salmonids and lampreys must pass through estuaries on their migration pathways (Boesch and Turner 1984). Steelhead Trout in the north-central coast spend a significant part of their juvenile phase in coastal estuaries (McEwan and Jackson 1996). Since estuaries and lagoons serve as important habitat linkages among marine, aquatic and terrestrial habitats, their condition is closely tied to the condition of the surrounding watershed. Estuaries provide critical ecosystem services such as filtering sediments and nutrients from the watershed, stabilizing shorelines, and providing flood and storm protection.

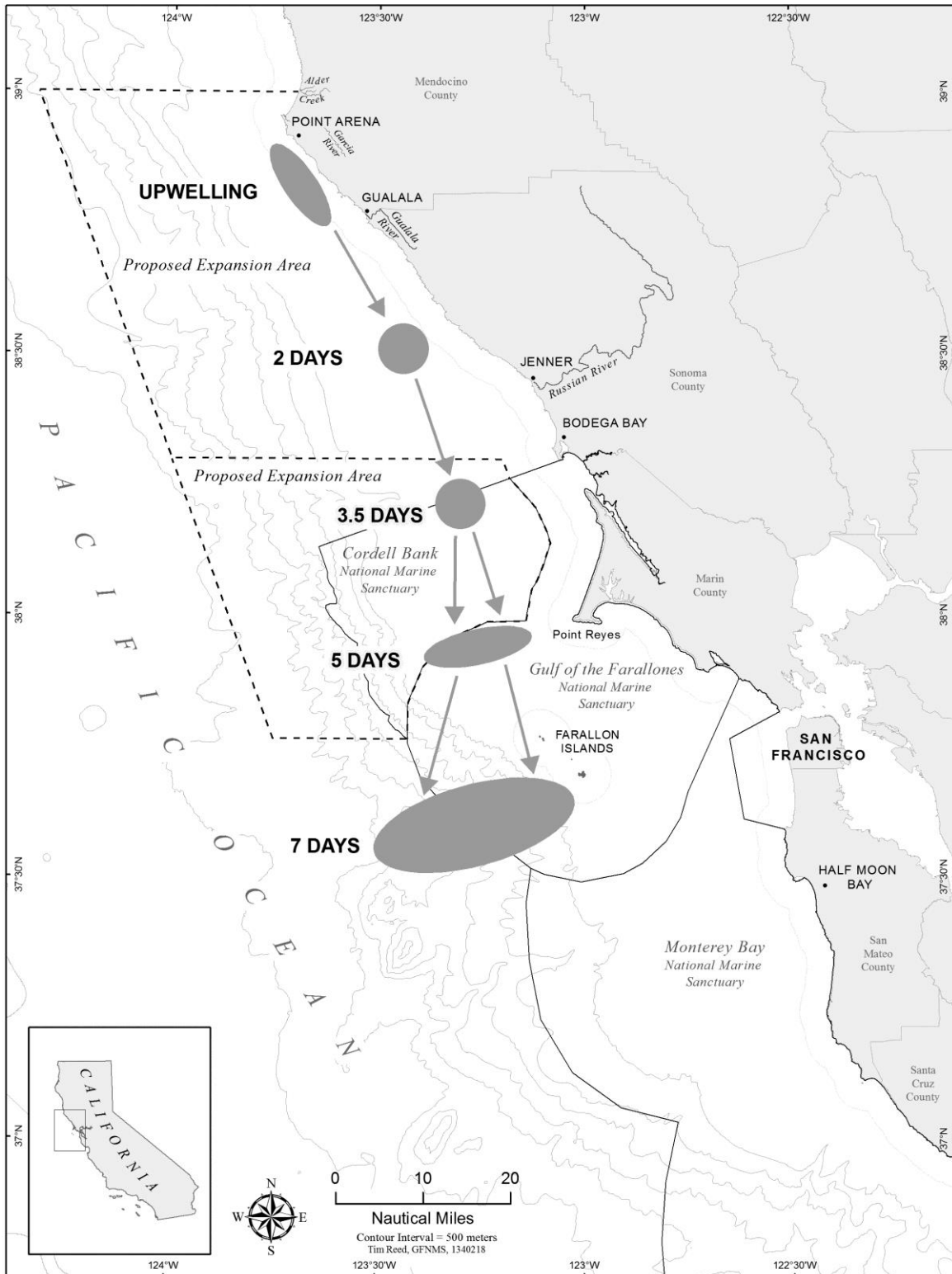


Figure 4.3-1. Southward Flow of Water from Upwelling Center at Point Arena

This schematic illustration developed by J.L. Largier from High Frequency radar observed flows (Halle and Largier 2011) shows typical surface flow patterns that transport newly upwelled water away from the perennial upwelling center at Point Arena. As the water is exposed to light, a phytoplankton bloom develops, with significant concentrations after a few days and maximum concentrations expected after about a week, when the water is in the vicinity of Cordell Bank and the Gulf of Farallones.

Estuaries at the mouth of the Garcia River (southern Mendocino County), the Gualala River (northern Sonoma County/southern Mendocino County), and the Russian River (central Sonoma County) are located in the study area. The Garcia River estuary forms behind a seasonal sandbar where the Garcia River meets the Pacific Ocean at Manchester State Beach. The Garcia River drains a mostly forested, 114-square-mile watershed where forestry, dairy farming, livestock grazing, and gravel mining take place. The Garcia River estuary hosts Steelhead and Coho Salmon and extends upriver to the confluence of Hathaway Creek.

The Gualala River drains approximately 298 sq miles of western Mendocino and Sonoma Counties and enters the Pacific Ocean at Gualala. During summer months, a sand bar typically forms across the mouth of the estuary which blocks the flow of tidewater creating a coastal lagoon (NOAA 2010). The Gualala River has small populations of Steelhead and Coho Salmon and the estuary serves as a nursery area and migration corridor for these species. Other species of fish found in the estuary include Roach, Coast Range Sculpin, Prickly Sculpin, Starry Flounder, and Pacific Staghorn Sculpin. Water quality in the watershed has suffered due to impacts from upland forestry and agriculture (Klamt et al 2002).

The Russian River drains an area of 1,485 sq miles in Mendocino and Sonoma Counties. The Russian River estuary is subject to frequent closures by the formation of a sandbar across the estuary mouth in the spring, summer, and fall. Tidal extent in the estuary can be up to 7.3 miles upriver and 800 feet wide. The closure of the estuary temporarily eliminates tidal exchange and creates ponding of the river, which results in a gradual increase of the water level in the estuary. The County of Sonoma removes a portion of the sandbar when necessary to limit property damage from flooding. Twenty-four species of fish including threatened populations of Steelhead, Chinook, and Coho Salmon, eight species of crab, and five species of shrimp are found in the Russian River estuary. This estuary also has a large harbor seal haul-out (Sonoma County Water Agency 2005).

Intertidal

Intertidal habitat, by definition, is found between the lowest and highest tidal level. This transitional area between sea and land is the strip of shore between the uppermost surfaces exposed to wave action during high tides and the lowermost areas exposed to air during low tides. Intertidal habitats vary in substrate type and the degree of exposure to surf. Bottom habitat types include fine muds, sand, gravel, shale, cobble, boulders, and bedrock. Rocky shores are found throughout the region, with a limited number of beaches. The intertidal zone represents a relatively small percent of the expansion area, but supports a diverse assemblage of marine life including sponges, tunicates, hydroids, mussels, crabs, sea stars, sea anemones, many different algae species, and many species of fishes. Surfgrass (*Phyllospadix couleri*) is an abundant habitat forming plant found in the high-energy low intertidal and shallow subtidal rocky bottoms along exposed outer coastlines.

Subtidal Nearshore

Subtidal nearshore habitat refers to the area from the lowest low tide line to about 100 feet, the end of the photic zone where light penetrates to support photosynthetic activity (CDFG 2007). The substrate can be sand, mud, or rock providing essential habitat for a thriving biological community in the study area.

In less than 60 feet of water, the kelp forest is a prominent nearshore habitat that is defined and influenced by canopy-forest forming species of kelp (Shaffer 2002), which is predominantly bull kelp (*Nereocystis*

lutkeana). Kelp beds are a conspicuous nearshore feature in the study area and fronds from the plants cover extensive areas on the ocean surface in areas of predominantly rocky substrate. The holdfast (roots), stipe (stem) and fronds of the bull kelp create structure and habitat from the seafloor to the surface. Kelp beds are persistent over time but exhibit marked seasonal and annual changes in the extent of the canopy, primarily due to winter storm activity and changing oceanographic conditions such as El Niño events. Studies have also shown that distribution and abundance of kelp beds and successional processes are affected by climatic and oceanographic changes, as well as by grazer abundances and fishing. Grazers, such as urchins, can play a large role in the abundance and distribution of kelp and urchin populations can, in turn, be directly controlled by their predators, e.g., sea otters, and by commercial urchin fishing. Kelp forests are one of the most productive marine habitats along the coast of California and provide habitat, feeding grounds, and nursery areas for many species of fishes and invertebrates. Juveniles of many nearshore rockfish species occur in the mid-water or upper kelp canopy. Juveniles and adults of many nearshore rockfish species, as well as Cabezon, greenlings, Lingcod, and many other species, associate with bottom habitats in kelp forests (CDFG 2007). In the study area, seals, sea lions, and (rarely) sea otters utilize nearshore environments for forage, shelter, and reproduction.

Continental Shelf and Slope

The continental shelf extends from the limit of the photic zone to the shelf break at about 328 to 656 feet (100 meters to 200 meters) deep. The shelf usually ends at a gradual slope called the shelf break, where the bottom sharply drops forming the continental slope. The continental slope together with the continental shelf is called the continental margin, which includes a variety of productive habitats. Soft sediment areas of the continental shelf and slope provide habitat for a diverse array of benthic organisms. Some areas on the shelf have dense aggregations of sea whips and brittle stars with sea pens, sea stars, and anemones also present. Dungeness crab are common residents of soft bottom shelf habitat. The continental margin makes up the majority of the study area.

The proposed expansion area consists of a broad continental shelf, which narrows to approximately 17 miles (15 nm west of Point Arena). Within the slope and shelf area are several notable geological features of hard substrate and rocky reef: the “Football” area 20 miles (17.5 nm) west of Jenner in Sonoma County; the Point Arena hard substrate area 8 miles (7 nm) west of Point Arena; the “Biogenic Area 12” 37 miles (32 nm) west of Salt Point; and the sloping edges of the continental shelf dissected by deep water canyons, such as Bodega and Arena Canyons. Not many research surveys have been conducted on these features, yet it is suspected that benthic communities on these features are similar to those found within the existing boundaries of CBNMS and GFNMS. Limited surveys of Bodega Canyon found that much of the hard substrate investigated was draped with a layer of mud so that invertebrate cover on the canyon edge was sparse. On the exposed rock substrate corals, sponges and an assortment of other benthic organisms were found (Fruh et al. 2013). Large aggregations of pelagic birds and marine mammals are often observed foraging in close proximity to Bodega Canyon. The distribution and abundance of these predators is an indication that the canyon is a very productive marine area.

Surveys of CBNMS and GFNMS have shown that deep reef areas provide critical habitat for a unique assemblage of fishes and invertebrates that are very different from shallow water assemblages. Rocky substrate areas are also known fishing spots for a variety of rockfishes and Lingcod.

Offshore Waters

Offshore waters refer to open water or pelagic areas seaward from the photic zone (CDFG 2007). Oceanographic conditions such as currents, water masses, and temperature strongly influence marine biodiversity in this open ocean environment. Variation in factors such as water temperature, upwelling and currents determine areas of productivity where krill, squid, anchovy, seabirds, and marine mammals congregate in the pelagic ecosystem (Forney, 2000; Yen et al., 2004). Oceanographic features include fronts where two water masses meet, recirculation eddies in the lee of headlands or islands, upwelling plumes, river or bay, and outflow plumes. Many of these oceanographic features can be associated with high abundances and biodiversity hotspots (CDFG 2007, Yen et al 2004). In addition, transport patterns associated with oceanographic features can significantly affect recruitment patterns of fish and invertebrates in intertidal and nearshore communities (Farrell et al 1991; Roughgarden et al 1991; Wing et al 1995, CDFG 2007). Presence of organisms in this open water habitat is highly variable and patchy because many have limited ability to swim and generally drift with ocean currents. Gelatinous zooplankton such as ctenophores, pteropods, siphonophores, jellies and salps are a good example of this condition. In deeper water near the continental shelf break, there is a nightly migration of krill, copepods, myctophid fish and other organisms (collectively called the scattering layer) from daytime use of the deeper water column closer to the bottom up into the water column. During the day, planktonic life in the upper water column in this offshore area can be relatively sparse, but this mass migration every night transforms the upper water column into a cacophony of life as prey and predators emerge under the cover of dark. This nightly ascent into the water column is a significant migration of biomass and an important link in the ecology of offshore waters.

Marine Flora

The nutrient rich coastal waters in the proposed expansion area support a healthy community of marine flora that is a significant component of the nearshore ecosystem. A diverse array of green, brown and red algae occurs on most rock surfaces from the intertidal zone to a depth of approximately 70 feet. Throughout the proposed expansion area, at least 22 species of green algae (Division Chlorophyta), 28 species of brown algae (Division Phaeophyta), 138 species of red algae (Division Rhodophyta), and two species of vascular plant (Division Tracheophyta) are known to occur (MARINE 2013, PISCO 2013, and Roletto et al. 2013).

As described in the subtidal nearshore subsection, dense forests of bull kelp dominate the nearshore area (15 to 60 feet water depth) providing shelter and food for scores of fishes and invertebrates, providing some of the most productive habitats along the West Coast (Tegner and Dayton 2000). Below the bull kelp canopy, several species of brown algae from the Laminariaceae family form a sub-canopy 2 to 3 feet off the seafloor. Encrusting and upright articulated coralline red algae cover rock surfaces and are intermingled with a diverse array of other algae in study area kelp forests. These kelp forests provide important feeding and breeding area for a wide variety of fish and invertebrates including juvenile and adult rockfish, Cabezon (*Scorpaenichthys marmoratus*) and Lingcod (*Ophiodon elongatus*) (Foster and Schiel 1985 and Allen et al. 2006). Rocky shores at minus tides are an explosion of texture and color provided by a diversity of marine flora in this region.

Along the shoreline in the lower intertidal zone, dense beds of the sea palm (*Postelsia palmaeformis*) occur in areas where the offshore kelp beds are sparse and high wave energy reaches the shoreline. Sea

palms are harvested in the study area. Surfgrass (*Phyllospadix scouleri*) can be abundant on intertidal and shallow subtidal rocky bottoms along exposed outer coastlines.

Wildlife Resources

The proposed expansion area hosts a wide range of fish and wildlife resources, including several special status species. Appendix G contains lists of the species that occur in the study area.

Fishes

Fish communities in the proposed expansion area are similar to those inhabiting the current GFNMS and CBNMS and described in the sanctuaries' respective condition reports (ONMS 2009, ONMS 2010), and the FEIS for the Jmpr (NOAA 2008). This includes shelf and slope species complexes for soft and hard bottoms, mid-water species, and migratory species such as salmon and Albacore Tuna. Many of the near-shore species inhabiting intertidal and shallow subtidal (less than 60 feet water depth) are also similar.

More than 180 species of fish have been documented in the CBNMS (Eldridge 1994, NMFS unpubl. data, Cordell Bank sanctuary unpubl. data), with rockfish dominating the fish community in both numbers and biomass. It is probable that hard bottom areas on the continental shelf in the proposed expansion area have similar fish composition to that observed on Cordell Bank. Several rockfish species (*Sebastes* spp.) probably dominate in numbers and biomass near deep reef areas. Areas with rocky structure on the shelf are likely important recruitment areas for first year rockfish settling out of the water column as they move from a pelagic to benthic phase in their early life history.

Limited scientific study has been focused on the ichthyofauna of the study area's soft-bottom habitat; however, considerable information has been gathered and analyzed on the fish assemblages that inhabit the continental shelf and slope habitats of the northeastern Pacific Ocean (Allen 2006). While soft-bottom areas are predominantly the domain of flatfishes, skates, and rays, numerous fusiform (spindle-shaped) fishes such as croakers, rockfishes, sculpins and surfperches also thrive in this habitat. Fishes commonly found in the middle shelf include: Big Skate (*Raja binoculata*), Longspine Combfish (*Zaniolepis latipinnis*), Shortbelly Rockfish (*Sebastes jordani*) and Pacific Sand Dab (*Citharichthys sordidus*). On the outer shelf, fishes more commonly seen in research collections include the Stripetail Rockfish (*Sebastes saxicola*), Greenstriped Rockfish (*Sebastes elongatus*) and Slender Sole (*Lyopsetta exilis*). Beyond the shelf break in the upper slope region, fishes most commonly found include poachers, Splitnose Rockfish (*Sebastes diploproa*) and Sablefish (*Anoplopoma fimbria*). Among the fishes that inhabit all three depth zones are Lingcod (*Ophiodon elongatus*), Spotted Cusk Eel (*Chilara taylori*), Plainfin Midshipman (*Porichthys notatus*) and Dover Sole (*Microstomus pacificus*).

Much of the water column habitat within the proposed expansion area overlies the continental shelf and comprises the coastal pelagic realm. Fishes which occupy the epipelagic zone (depth to 656 feet) are a mixed group of larger, slow growing, longer-lived species and active, fast growing, shorter-lived fishes (Allen and Cross 2006). Fishes commonly placed in the former group include sharks (Blue Shark *Prionace glauca*, White Shark *Carcharodon carcharias*, Thresher Shark *Alopias vulpinus*), Jack Mackerel (*Trachurus symmetricus*), Pacific Mackerel (*Scomber japonicus*) and Pacific Hake (*Merluccius productus*). The latter group occupying the epipelagic zone is composed of early life history stages of many fishes (including Lingcod, rockfishes and many flatfish species) as well as the commercially important Northern Anchovy

(*Engraulis mordax*) and Pacific Sardine (*Sardinops sagax*). Anchovies and sardines, which are an important prey for many coastal predators and a critical link in the coastal food web, have alternated as the most abundant fishes of the coastal pelagic realm off California throughout recent history. Abundance of these short lived fishes is related to oceanographic cycles within the region. For example, the alternating 20 to 30 year periods of cool and then warm phases in the Pacific Ocean track fluctuations in the alternating abundances of anchovies (cool periods) and sardines (warm periods) (Chavez et al. 2003). Other fishes that inhabit the epipelagic zone include species that frequent the sanctuaries on a seasonal basis, such as Albacore Tuna (*Thunnus alalunga*) and Chinook (*Oncorhynchus tshawytscha*), and Coho Salmon (*O. kisutch*). Mesopelagic fishes (those found below the epipelagic zone to depths of 3280 feet) are relatively small, slow-growing and long-lived. Representatives of this group include the lantern fishes, hatchet fishes and deep-sea smelts. Many mesopelagic fishes make nocturnal vertical migrations to feed.

As stated above, several species of rockfish settle out of the water column and spend their first year of life on rocky reefs, including those with kelp beds. Some species remain in the kelp beds, other species migrate into deeper water for the adult phase of their lives. The most common juvenile rockfish observed in kelp beds includes Blue, Black, Yellowtail and Widow Rockfish in spring and the Copper/Gopher complex in late summer. Other juvenile species regularly observed include Canary, Bocaccio and Shortbelly. Several species of adult rockfish are commonly seen in kelp beds — Blue, Black, China, Gopher, and other species and species groups include Lingcod, Cabezon, Kelp Greenling, cottids, surf perches, gobies, gunnels, and tubenouts eel.

A small group of specialized fishes is found in tide pools of rocky intertidal habitats. Representative species include the Monkey-Face Prickleback (*Cebidichthys violaceus*), Rock Eel (*Pholis gunnellus*), Rockweed Gunnel (*Xerperes fucorum*), Blackeye Goby (*Coryphopterus nicholsii*), Dwarf Surfperch (*Micrometrus minimus*), juvenile Cabezon (*Scorpaenichthys marmoratus*), Tidepool Sculpin (*Oligocottus maculosus*), Tidepool Snailfish (*Liparis florum*) and blennies (Airamé, S., et al. 2003).

Based on recommendations within amendment 19 of the Pacific Coast Groundfish Fishery Management Plan, NOAA's National Marine Fisheries Service (NMFS) implemented in 2006 essential fish habitat (EFH) for groundfish. See Section 4.2.2 (Regulatory Overview) for additional details regarding groundfish management.

Salmonid Species

Steelhead Trout and two species of salmon — Coho and Chinook — are considered endangered or threatened under the Endangered Species Act in the study area. The three major streams in the study area that support salmonid runs are the Garcia, Gualala and the Russian River. The Garcia and Russian River support populations of all three species while the Gualala supports runs of Steelhead Trout (CDFG 2007). Many of the smaller coastal streams likely support populations of Steelhead. The marine waters in the proposed expansion area are important for these fishes during the ocean phase of their life history, where they feed and grow to maturity before returning to coastal streams to spawn. Salmonid species originating from the various runs in California described below may spend part of their life cycles within the proposed sanctuary expansion area, as may salmonids from runs elsewhere.

Salmon. Two evolutionarily significant units (ESUs) of Chinook Salmon (*O. tshawytschus*) are listed as threatened. One is the California Coastal ESU, which includes the Russian River, where populations are

slowly increasing. The other threatened Chinook Salmon ESU is the Central Valley Spring Run ESU, which has only three wild populations left in Mill, Deer, and Butte Creeks (fish have also recently returned to Big Chico Creek), mostly due to blocked access to traditional spawning areas by dams, which impair salmon migration. The Sacramento River Winter Run ESU, which was greatly affected by the construction of Shasta Dam, is listed as endangered (CDFG 2007). One ESU of Coho Salmon (*O. kisutch*), the Central California Coast ESU, is listed as endangered. This ESU runs from Punta Gorda in the north (just south of Cape Mendocino) to the San Lorenzo River in Santa Cruz County. Of the 133 historical runs, only 56 (or 42%) are now considered occupied. The highest occupation is in Mendocino County (62% of historical runs), followed by Marin County (40%), and Sonoma County (4%). Central California Coast Coho Salmon return to major rivers and creeks in the north central coast study region for this species, including the Garcia, Gualala, and Russian Rivers, and Tomales Bay creeks, as well as numerous smaller creeks. Since 2001, the Russian River Coho Salmon Captive Broodstock Program has been re-establishing Coho in the Russian River. The program captures, rears, and spawns Coho broodstock, and young fish are released in area tributary streams. Growth and survival is monitored until they move downstream and into the Pacific Ocean (CDFG 2007a). It is likely that all of these endangered runs of salmon depend on the ocean waters of the proposed expansion area for food and shelter during the ocean water phases of the salmon's lifecycle.

Steelhead Trout. Three distinct population segments (DPS) of Steelhead Trout (*O. mykiss*) are listed as threatened in the north-central coast study region for this species. The Northern California DPS ranges from Redwood Creek in Humboldt to the Gualala River and is found in both the Garcia and Gualala Rivers. The Central California Coast DPS ranges from the Russian River, which probably hosted the largest historic population, to Soquel Creek in Santa Cruz County, and includes some tributaries in San Francisco and San Pablo Bays. Both the Northern California and Central California Coast DPSs have benefited from a prohibition of ocean harvest of Steelhead Trout enacted in 2002.

White Shark

White Sharks (*Carcharodon carcharias*) have a wide range and are known to inhabit the study area. Studies estimate the number of adult White Sharks within the northeastern Pacific area at approximately 3000 individuals (NMFS 2013). Subsisting mostly on marine mammals and scavenged large animal carcasses, White Sharks often feed off the Farallon Islands, especially during the late summer and fall. In 1994, the state of California placed White Sharks on the list of species protected in state waters and in 1997 California state law permanently prohibited take of White Sharks. In July 2013, NMFS denied a petition to list the northeastern Pacific population of White Sharks as threatened or endangered. After scientific review, it was determined that the population was considerably larger than first reported.

Marine Mammals

At least 16 species of cetaceans of which five are endangered — the Blue Whale (*Balaenoptera musculus*), Fin Whale (*Balaenoptera physalus*), Humpback Whale (*Megaptera novaeangliae*), Killer Whale (*Orcinus orca*), and Sperm Whale (*Physeter macrocephalus*), six species of pinnipeds of which one is threatened — the Guadalupe fur seal (*Arctocephalus townsendi*), and two species of otters, a river otter (*Lontra Canadensis*) and the southern sea otter (*Enhydra lutris nereis*), which is threatened, occur within the

study area (see Appendix G for species list, Pyle et al. 2005, NOAA 2007, Barlow et al. 2008, FMSA 2013, and PRBO 2013); ten of these species use the study area during their breeding season.

Gray whales (*Eschrichtius robustus*), pass through the area during the winter and spring months on their annual migrations between Arctic feeding grounds and Mexican breeding areas. The Dall's porpoise (*Phocoenoides dalli*), Pacific white-sided dolphins (*Lagenorhynchus obliquidens*), and northern right whale dolphins (*Lissodelphis borealis*) are commonly seen in the offshore waters, along with Eastern Pacific humpback (*Megaptera novaeangliae*) and blue whales (*Balaenoptera musculus*). Large numbers of humpback whales and blue whales feed during the summer and fall months and use the study area as a destination feeding area.

The harbor porpoise (*Phocoena phocoena*), a species widely distributed in coastal waters but rarely seen offshore, is regularly observed within the study area. Other cetaceans observed in the Sanctuary include Risso's dolphins (*Grampus griseus*) and killer whales (*Orcinus orca*).

The harbor seal (*Phoca vitulina*) is the most abundant pinniped in the study area, with numerous breeding and haul-out areas along the coast. The largest rookeries are located at Goat Rock and the mouth of the Russian River, Fort Ross, and The Sea Ranch (NOAA 2007). California sea lions (*Zalophus californianus*) do not breed within the study area but use the numerous offshore rocks and sea stacks dotting the coastline of the study area. The largest haul-out areas for California sea lions are found at Fort Ross and Fish Rocks. Northern fur seals (*Callorhinus ursinus*) are also abundant in the offshore areas in late fall and winter during their foraging season. Prior to their local extirpation by Russian fur traders in the 1800s, northern fur seals bred along offshore islands and rocks along northern California. Since 1996, a small breeding colony has reestablished at the Farallon Islands (Pyle et al. 2001). Most of the year, fur seals are pelagic and only come to shore during their summer breeding season at the Channel and Farallon Islands.

Steller sea lions (*Eumetopias jubatus*) decreased drastically in California during the 1950-1980s, but the breeding rookeries at Año Nuevo Island and the Farallon Islands have been stabilizing for the past ten years (Pitcher et al. 2007). Steller sea lion populations in the California, Oregon and Washington area were delisted from the threatened species list in late 2013. Fish Rocks, Northwest Cape Rocks, and Russian River Rock are important rookeries and haul-outs for Steller sea lions within the study area. The sea lions' winter haul-out grounds include Point Reyes and offshore rocks along the Sonoma County coast. Guadalupe fur seals (*Arctocephalus townsendi*) are a threatened species that are rarely found within the study area. The main populations of Guadalupe fur seals are in southern California and Guadalupe Island off of Baja, Mexico. There are no known rookeries for elephant seals (*Mirounga angustirostris*) within the study area. Juvenile elephant seals will occasionally haul out at Goat Rock and are occasionally observed offshore. Southern sea otters (*Enhydra lutris nereis*) were once abundant along the entire northern coast of California including the study area. Russian fur traders extirpated all sea otters from the northern California coast and now only a few sea otters are rarely seen north of San Mateo County (Stewart and Praetzelis 2003).

Birds

The waters throughout the proposed expansion area provide valuable habitat for a variety of seabirds and coastal birds. At least 149 species of seabirds and coastal birds, of which one endangered species and three threatened species, occur throughout the study area (Pyle et al. 2005, NOAA 2007, Barlow et al.

2008, FMSA 2013, and PRBO 2013). Approximately a third of these species use the expansion area during their breeding season. The study area includes important habitat for numerous shorebird species. Shorebirds commonly seen foraging along the shoreline include Marbled Godwits (*Limosa fedoa*), Western Sanderlings (*Calidris alba*), and Black Oystercatchers (*Haematopus bachmani*). Another bird found in the area is the Western Snowy Plover (*Charadrius alexandrinus nivosus*), whose threatened status has resulted in significant resource management actions including restrictions on access or types of use in some shoreline areas.

The Marbled Murrelet (*Brachyramphus marmoratus*) is another bird species found in the study area that is listed as threatened under the Endangered Species Act. The Marbled Murrelet is a unique seabird because it nests inland on the branches of coastal, old growth coniferous trees, often over a hundred feet above the ground (Leet et al. 2001).

Large offshore rocks and coastal bluffs are nesting areas for several seabirds such as cormorants, Western Gulls (*Larus occidentalis*), and Pigeon Guillemots (*Cephus columba*). Fish Rocks is one of the top breeding colonies in the study area, supporting nine breeding seabird species (NOAA 2007). Other locations within the study area significant to breeding seabirds include Gualala Point Island, Russian Gulch, and Arched Rock located along the Sonoma Coast State Beaches.

Migrant seabirds come to the area in the summer and late fall to feast on zooplankton (krill and copepods) and fishes that thrive in the productive upwelled waters. One of the most abundant seabird species, the Sooty Shearwater (*Puffinus griseus*), comes through California waters by the hundreds of thousands, mostly from New Zealand breeding colonies. Large numbers of Black-footed Albatross (*Phoebastria nigripes*) visit the region from their nesting colonies in Hawaii (Leet et al. 2001). An individual Laysan albatross (*Phoebastria immutabilis*) frequents the harbor at Arena Cove, which is unusual for this normally pelagic species. The study area is also a significant foraging region for the Rhinoceros Auklet (*Cerorhinca monocerata*), the Northern Fulmar (*Fulmarus glacialis*), various storm-petrel species (family Hydrobatidae), phalaropes (family Scolopacidae), and many species of gulls (family Laridae). Bald Eagles (*Haliaeetus leucocephalus*) and Osprey (*Pandion haliaetus*) may occur year-round hunting the waters, cliffs, sand dunes, and beaches within the study area.

Researchers from Point Blue Conservation Science (formerly PRBO Conservation Science) developed habitat association models for 16 species of seabirds using information from at-sea surveys carried out over a 12-year period and found persistent important seabird habitat “hotspots” within the study area, including off Point Arena (Nur et al. 2011).

Invertebrates

The intertidal community contains a diverse array of invertebrates competing for space including sponges, tunicates, hydroids, abalone, barnacles, limpets, mussels, sea anemones and sea urchins. Mobile invertebrates, such as sea stars, snails, and crabs, often hide in crevices or under rocks, emerging to graze on algae or prey on other animals (ONMS 2010).

Sonoma and Mendocino coasts support healthy populations of red abalone (*Haliotis rufescens*). This slow-growing mollusk is an important part of the intertidal and subtidal community living to water depths of about 100 feet. It takes an abalone an average of ten years to reach a diameter of seven inches. A die-off

of abalone and other marine invertebrates associated with a harmful algal bloom (red tide) occurred in late August 2011 along the Sonoma County coast. Concern over the impact of the die-off on abalone populations prompted an intensive monitoring effort by the California Department of Fish and Wildlife. Survey results show a 60 percent decline in density from Sonoma County study sites; low densities at the Fort Ross site are of particular concern (CDFW 2012). Population numbers of red abalone in the study area are comparatively higher because their natural predators, sea otters, are rarely found north of San Francisco. Their main predators currently are recreational free divers who avidly harvest red abalone.

Red sea urchins (*Strongylocentrotus franciscanus*) are subtidal herbivores that play an important ecological role in the structure of kelp forest communities. In northern California urchins feed on bull kelp and other algal species. Tagging studies reveal that red urchins are long-lived; reaching 50 years. Large individuals may be older than 100 years (Leet 2001).

Rocky features and ridges in the study area may be thickly covered with sponges, anemones, hard and soft corals, hydroids, tunicates, holothurians, and gastropods. Soft bottom habitats also support a thriving community of benthic invertebrates. Adapted to life in and on a shifting substrate, these animals are either buried in the sediment, like polychaete worms and clams, or are mobile on the surface, such as sea stars and Dungeness crabs (*Cancer magister*) (ONMS 2009). Dungeness crab are an important commercial and recreational fishery in the proposed expansion area. The west coast Dungeness crab fishery is considered the most sustainable large-scale commercial crab fishery in the world (NOAA 2008).

The continental slope and canyon systems in the study area support deep-sea corals and sponges among other deep water species. A broad-scale characterization of deep-sea coral and sponge habitats and communities was conducted in Bodega Canyon and on the nearby continental slope during summer of 2011 using an autonomous underwater vehicle. Nine taxa of sponges and eight taxa of corals were observed. The most abundant corals encountered included mushroom corals (*Anthomastus ritteri*) and various fan-like gorgonians (*Parastenella* spp. and *Plumerella* spp.). The most abundant sponges were branching and vase sponges (Fruh et al. 2013). Deep-sea corals and sponges are long-lived, slow growing, fragile animals; characteristics that make them particularly vulnerable to physical disturbance such as bottom contact fishing gear and effects from climate change and ocean acidification. Additionally, the complex structures and forms of deep-sea coral and sponges have shown these species are of potential value for commercially important fishes and other invertebrates as habitat for protection from predators and for enhanced feeding opportunities.

A myriad of gelatinous zooplankters inhabit the pelagic water column, including moon jellies (*Aurelia aurita*) and sea nettles (*Chrysaora fuscescens*), as well as more obscure invertebrate creatures such as hydromedusae, ctenophores, siphonophores, pteropods, and heteropods. These animals feed and are preyed upon in the water column of the study area (ONMS 2009). These gelatinous invertebrates are an important food source for fishes and leatherback sea turtles (*Dermochelys coriacea*).

Two species of krill (*Thysanoessa spinifera* and *Euphausia pacifica*) are important trophic links in the study area ecosystem. These small, shrimp-like crustaceans are referred to as “keystone” species because they are critical prey for many other species. Each spring and summer, massive swarms of krill provide food for many species in the study area ecosystem including seabirds, fishes and whales (ONMS 2009).

Introduced Species

Introduced species (also known as non native, or exotic species) are present in the marine and estuarine environments and can be a major environmental threat to living resources and habitats in the proposed expansion area. Human introduction of non native species (also sometimes called aquatic nuisance species or fouling organisms) into waters where they are not already established is an issue that has received much attention in recent years. Once introduced to marine ecosystems to which they are not native, introduced species can pose a significant threat to water quality and are capable of disrupting the ecosystems.

The ONMS uses the term “introduced species” to describe a non-native species or any organism that has been genetically modified. Introduced species are known to threaten the diversity or abundance of native species (especially threatened and endangered species), alter species composition, and interfere with the ecosystem’s function, often threatening the ecological stability of the infested waters. They may cause local extinction of native species either by preying on them directly or by out-competing them for prey. For example, the European green crab, now found in Bolinas Lagoon, Tomales Bay, Estero de San Antonio, Estero Americano, and Bodega Harbor, preys on the young of valuable species (such as oysters and Dungeness crab) and competes with them for prey and suitable habitats. Introduced species may also cause changes in physical habitat structure.

Presently, there are no reports of known introduced species along the outer coast of Sonoma and Mendocino Counties within the study area; this may reflect a low presence of estuarine habitat, marinas, docks, or piers (MARINe 2013, PISCO 2013, and UCD 2013),¹⁵ or relatively little searching for such species from trained scientists. Introduced species are known to occur in the coastal dune habitat adjacent to the study area. Introduced dune plants limiting native dune species include hottentot fig (*Carpobrotus edulis*), sea fig (*Carpobrotus chilensis*), Uruguayan pampas grass (*Cortaderia selloana*), and European beachgrass (*Ammophila arenaria*). Even though these species are not within the boundary of the proposed expansion area, they do have negative impacts on the sandy beach ecosystem by changing the availability of foraging, roosting and nesting areas for shorebirds, deposition of beach wrack, and long shore sediment transport (UCD 2013).

Along the outer coasts of Sonoma and Mendocino Counties, commercial vessels would be the most likely future contributor of introduced species, from ballast water and fouling organisms on vessel hulls. Other possible future sources of introduced species in the study area could be from commercial and recreational vessels transiting the study area after having been in such locations as Bodega Harbor, San Francisco Bay or Monterey Harbor, where introduced species are known to exist and colonize on vessel hulls.

Once established, introduced species can be extremely difficult to control or to eradicate. Throughout the nation, hundreds of federal programs, state organizations, international organizations, and non-profit organizations have established databases, community outreach, monitoring, eradication, research and education programs, but none of these programs are operative within the study area. Future dune restoration programs to eradicate invasive dune plants could improve sandy beach habitat.

¹⁵ Arena cove contains a pier and other harbor facilities; it is included in one boundary alternative, but is excluded from the proposed action boundary.

4.3.2 Regulatory Overview

There are numerous federal and state laws and regulations providing protection of biological resources in the study area. An overview of some of the primary regulations and regulating agencies are summarized below (note, the following does not comprise a comprehensive list).

Federal Regulations

Endangered Species Act (ESA), 16 U.S.C. §§ 1531-1544

The ESA protects plant, fish and wildlife species (and their habitats) that are listed as endangered and threatened. Species are listed as endangered if found to be in danger of extinction throughout all or a significant portion of their ranges; species are listed as threatened if they are likely to become endangered within the foreseeable future. The ESA also protects designated critical habitat for listed species, which are areas of physical or biological features essential to the conservation of the species and which may require special management considerations. The ESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) and/or NMFS, as applicable, before initiating any action that may affect a listed species.

Magnuson-Stevens Fishery Conservation and Management Act (MSA), 16 U.S.C. § 1801 et seq.

Under the MSA, the U.S. claimed sovereign rights and exclusive fishery management authority over all fish, and all Continental Shelf fishery resources, within the Exclusive Economic Zone (EEZ) (within 230 miles [200 nm] of the shoreline). The MSA established a procedure for authorizing foreign fishing, and prohibited unauthorized foreign fishing within the EEZ.

The MSA also established national standards for fishery conservation and management within the EEZ, and created eight Regional Fishery Management Councils composed of state officials with fishery management responsibility, the regional administrators of NMFS, and individuals appointed by the Secretary of Commerce who are knowledgeable regarding the conservation and management, or the commercial or recreational harvest, of the fishery resources of the geographical area concerned. The Councils are responsible for preparing and amending fishery management plans for each fishery under their authority that requires conservation and management.

Fishery management plans (FMPs) describe the fisheries and contain necessary and appropriate conservation and management measures, applicable to foreign vessels in U.S. waters and fishing by U.S. vessels. The plans are submitted to the Secretary of Commerce, who has delegated to NOAA approval of the plans. If approved, NMFS promulgates implementing regulations. NMFS may prepare Secretarial FMPs if the appropriate Council fails to develop such a plan.

Of particular relevance to this EIS is the Groundfish FMP. Amendment 19 was prepared by NMFS and the Pacific Fishery Management Council (PFMC) to comply with Section 303(a)(7) of the MSA by amending the Pacific Coast Groundfish FMP to:

- Describe and identify EFH for the fishery;
- Designate Habitat Areas of Particular Concern (HAPC);
- Minimize to the extent practicable the adverse effects of fishing on EFH; and
- Identify other actions to encourage the conservation and enhancement of EFH.

On May 11, 2006, NMFS published a final rule to implement regulatory provisions of Amendment 19 to the Pacific Coast Groundfish FMP (71 FR 27408). This rule implemented management measures to minimize adverse impacts on EFH from fishing, including gear restrictions and area closures. There are two Bottom Trawl Closed Areas in the study area: Point Arena North and Point Arena South Biogenic Area. There is also a bottom trawl footprint closure that prohibits the use of bottom trawl gear in depths greater than 700 fathoms to the outer extent of groundfish EFH (3,500 m) or the seaward extent of the EEZ, preventing the expansion of the use of this gear type into area where its historical use has been limited.

Fish and Wildlife Coordination Act and Implementing Regulations, 16 U.S.C. §§ 661-666c

Any federal agency that proposes to control or modify any body of water must first consult with the USFWS or NMFS, as appropriate, and with the head of the appropriate state agency exercising administration over the wildlife resources of the affected state. The U.S. Army Corps of Engineers (USACE) has a memorandum of understanding with the USFWS to provide a coordination act report to assist in planning efforts.

Migratory Bird Treaty Act (MBTA), 16 U.S.C. § 703 et. seq.

The MBTA is a federal statute that implements U.S. treaties with several countries concerning the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 CFR 10.13. Further, the regulatory definition of a migratory bird is broad and includes any mutation or hybrid of a listed species, as well as any part, egg, or nest of such bird (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened under the ESA. The MBTA, which is enforced by the USFWS, makes it unlawful “by any means or manner, to pursue, hunt, take, capture [or] kill” any migratory bird except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale purchase, barter, or the offering of these activities, except as permitted by the implementing regulations.

Marine Mammal Protection Act (MMPA), 16 U.S.C. §§ 1361-1421h

The MMPA protects and conserves marine mammal species by placing a moratorium on harassing, hunting, capturing, or killing any marine mammal or attempting any of these. If a project proponent determines that an action could incidentally harass (“take”) marine mammals, the proponent must consult with either the USFWS or NMFS to determine if a permit to take a marine mammal is required. A recent redefinition of “take” of an MMPA-protected species occurred under the FY 2004 Defense Authorization Act (House Bill 1588), where an animal is “taken” if it is harassed, and where harassment is defined as “(i) any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild or (ii) any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered” (section 315(f) P.L. 107–314; 16 U.S.C. § 703 note).

Rivers and Harbors Appropriations Act (RHA) of 1899, 33 U.S.C. §§ 401, 403

Section 10 of the RHA prohibits the unauthorized obstruction or alteration of any navigable water. Navigable waters under the RHA are those “subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce” (33 CFR 3294). Typical activities requiring Section 10 permits from USACE are construction

of piers, wharves, bulkheads, marinas, ramps, floats, intake structures, cable or pipeline crossings, and dredging and excavation.

Coastal Zone Management Act (CZMA), 16 U.S.C. §§ 1451-1466

The CZMA encourages states to preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources, such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. To encourage states to participate, the CZMA makes federal financial assistance available to any coastal state or territory that is willing to develop and implement a comprehensive coastal management program. Federal agencies are required to carry out activities that affect any land or water use or natural resource of a state's coastal zone in a manner consistent with the enforceable policies of an approved state management plan.

National Aquatic Nuisance Prevention and Control Act (NANCPA) of 1990

NANCPA 90 mandates ballast water management for vessels entering the Great Lakes. This law was reauthorized as the National Invasive Species Act of 1996 (NISA 96), which strengthened the 1990 law and required the development of voluntary ballast management guidelines for all other ships entering U.S. waters. The law also requires all vessels that enter U.S. territorial waters (with certain exemptions) to manage ballast water according to prescribed measures. NISA 96 also required the US Coast Guard (USCG) to evaluate the effectiveness of the voluntary ballast management program three years after implementation. In 2004, voluntary guidelines were determined to be ineffective, and thus USCG initiated mandatory ballast management for all ships entering U.S. waters from outside the Exclusive Economic Zone (EEZ) of the United States.

Current management strategies for preventing introductions via ballast water are limited to ballast water retention, open ocean exchange or alternate environmentally sound methods of ballast water management approved by USCG.

Title I of the Marine Protection, Research, and Sanctuaries Act, Ocean Dumping Act (MPRSA), 33 U.S.C., §§ 1401-1420

The USEPA has regulatory responsibilities with regard to ocean water quality under both the Clean Water Act and Title I of the MPRSA (Ocean Dumping Act). Title I of the MPRSA prohibits all ocean dumping, except that allowed by permits, in any ocean waters under U.S. jurisdiction, by any U.S. vessel, or by any vessel sailing from a U.S. port. Certain materials, such as high-level radioactive waste, chemical and biological warfare agents, medical waste, sewage sludge, and industrial waste, may not be dumped in the ocean. The law regulates ocean dumping within the area extending 12 nm seaward from the U.S. baseline and regulates transport of material by U.S.-flagged vessels for dumping into ocean waters (Copeland 2010). Additional information about the types of permitted discharges allowed under the Act is in the water quality regulatory overview in Section 4.2 (Physical Resources).

State Regulations

California Endangered Species Act (CESA), California Fish and Game Code §§ 2050-2111.5

The CESA places the responsibility for maintaining a list of threatened and endangered species with the California Department of Fish and Wildlife (CDFW). The CDFW also maintains a list of candidate spe-

cies that are under review for addition to either the list of endangered species or the list of threatened species. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any California-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may affect a candidate species.

Fish and Wildlife Protection and Conservation, California Fish and Game Code §§ 1600-1616

The state's authority in regulating activities in wetlands resides primarily with the CDFW and the State Water Resources Control Board (SWRCB). The State of California regulates wetlands through the CDFW, which provides comment on USACE permit actions under the Fish and Wildlife Coordination Act. The CDFW may develop mitigation measures and require the preparation of a streambed alteration agreement if a proposed project would obstruct the flow or alter the bed, channel, or bank of a river or stream in which there are fish or wildlife resources, including intermittent and ephemeral streams. The CDFW is authorized to do so by the State Fish and Game Code Sections 1600-1616.

The California legislature gave the Fish and Wildlife Commission the authority to establish State Marine Reserves, State Marine Conservation Areas, State Marine Parks, State Marine Recreational Management Areas, and Special Closures as a result of the California Marine Life Protection Act of 1999. The California Fish and Wildlife Commission also has the authority to prohibit or restrict activities that may harm resources, including fishing, collecting, swimming, boating, and public entry. The CDFW also conducts oil spill response, damage assessment, and restoration through its Office of Spill Prevention and Response.

California Code of Regulations, Title 14 Division 1

The Fish and Game Commission has broad authority under Title 14 to establish regulations that restrict both sport and commercial fishing and otherwise afford protection to marine organisms and habitats. Of particular relevance to this DEIS are the eleven existing MPAs in the study area (Title 14, Section 632). MPAs in the study area have been in effect since May 1, 2010.

There are a total of four State Marine Reserves in the study area: Point Arena, Del Mar Landing, Stewarts Point, Gerstle Cove and Bodega Head. In a state marine reserve, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource, except under a scientific collecting permit or specific authorization from the California Fish and Wildlife Commission for research, restoration, or monitoring purposes.

There are a total of six State Marine Conservation Areas in the study area: Point Arena, Sea Lion Cove, Saunders Reef, Stewarts Point, Salt Point, and Russian River. In a state marine conservation area, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for commercial or recreational purposes, or a combination of commercial and recreational purposes except as specified. The California Fish and Wildlife Commission may issue scientific collecting permits or specifically authorize research, education, and recreational activities, and certain commercial and recreational harvest of marine resources, provided that these uses do not compromise protection of the species of interest, natural community, habitat, or geological features.

There is one State Marine Recreational Management Area in the study area: the Russian River State Marine Recreational Management Area. In a state marine recreational management area, it is unlawful to perform any activity that would compromise the recreational values for which the area may be designated. Recreational opportunities may be protected, enhanced, or restricted, while preserving basic resource values of the area. No other use is restricted unless specified.

California Coastal Act (CCA), California Public Resources Code § 30000 et seq.

The CCA defines the “coastal zone” as the area of the state that extends 3 miles seaward and generally about 1,000 yards (910 meters) inland. Almost all development within the coastal zone, which contains many wetlands, requires a coastal development permit from either the California Coastal Commission or a local government with a certified Local Coastal Program. Additional details are provided in the regulatory overview of Section 4.6 (Socioeconomic Resources, Human Uses, and Environmental Justice).

State Water Resources Control Board (SWRCB)

The SWRCB adopts statewide water quality control plans and policies, such as the Ocean Plan, the Thermal Plan, and the State Implementation Policy. The SWRCB has established a system of 34 Areas of Special Biological Significance (ASBS). These areas are designated for special protection from undesirable alteration in natural water quality. Four ASBSs are located in the study area, including Saunders Reef, Del Mar Landing, Gerstle Cove, and Bodega. Additional information about ASBS designations and the regulatory environment of the State Water Resources Control Board is in Section 4.2.2 (Physical Resources – Regulatory Environment).

California Marine Invasive Species Act, Cal. Pub.Res. Code § 71200 et seq.

See Section 4.2.2 (Physical Resources Regulatory Environment) for more information about the California invasive species regulatory environment.

California Code of Regulations, Title 2, Division 3, Chapter 1, Article 4.6

Article 4.6 was designed to move the state toward elimination of the discharge of nonindigenous species into the waters of the state or into waters that may impact the waters of the state, based on the best available technology economically achievable. The provisions of Article 4.6 apply to all vessels arriving at a California port or place from another port or place within the Pacific Coast Region. All such vessels shall (1) exchange ballast water in near-coastal waters (more than 50 nm from land and in water at least 200 meters [656 feet, 109 fathoms] deep) before entering the waters of the State if that ballast water was taken on in a port or place within the Pacific Coast Region, (2) retain all ballast water on board, (3) discharge the ballast water to a reception facility approved by the California State Lands Commission (CSLC) or (4) use an alternative, environmentally sound method of ballast water management that has been approved by the CSLC or the USCG.

4.3.3 Impact Assessment Methodology

Criteria to determine the significance of impacts on biological resources are based on federal, state, and local standards and regulations. Impacts on biological resources were evaluated by determining the sensitivity, significance, or rarity of each resource that would be affected by the proposed or alternative regulations and by using thresholds of significance to determine if the impact constitutes a significant impact.

The significance threshold may be different for each habitat or species. Impacts may be either direct or indirect.

Direct impacts on biological resources result when biological resources or critical habitats are altered, destroyed, or removed during the course of project implementation. Indirect impacts on biological resources may occur when project-related activities result in environmental changes that indirectly influence the survival, distribution, or abundance of native species (or increase the abundance of an introduced species). Examples of indirect impacts include effects of noise, presence of chemical contamination, or incidence of human activity that may disturb or harm wildlife. It is also possible to have beneficial impacts, directly or indirectly. Finally, impacts may be short term or long term. Short-term impacts are generally not considered significant, by definition.

For this analysis, assessing specific potential impacts on biological resources is based on looking at the physical implications of each proposed and alternative regulation considered in relation to the known presence and extent of biological resources in the relevant areas. Parameters for assessment include the following:

- Relative importance or value of the resource affected (e.g., its legal, commercial, recreational, ecological, or scientific value);
- The resource's relevant occurrence in the region;
- Sensitivity of the resource to the proposed action;
- Anticipated physical extent of the potential impact; and
- Anticipated duration of the ecological ramifications of the potential impact.

Where relevant, the importance or value of each biological resource is evaluated based on the following criteria (listed in order of importance):

- Designation of the resource by federal or state resource agencies (e.g., USACE and the USFWS) as a high value or sensitive resource;
- Known or presumed regional sensitivity of the resource; and
- Known or presumed local significance of the resource.

In sum, for this analysis a project alternative was considered to have a significant impact on the biological environment under any of the following circumstances:

- a population of a threatened, endangered, regulated, or other sensitive species was adversely affected by reduction in numbers, by alteration in behavior, reproduction, or survival, or by loss or disturbance of habitat. Any “take” (see Section 3.3.10 under Wildlife Disturbance for definition) of a listed or sensitive species is considered significant under the ESA or the MMPA;
- it conflicted with Coastal Zone Management Program policies;

- it had an adverse effect on a species, natural community, or habitat that is specifically recognized as biologically significant in local, state, or federal policies, statutes, or regulations;
- it had a substantial adverse effect on a species, natural community, or habitat that is recognized for scientific, recreational, ecological, or commercial importance;
- any fishes or wildlife migration routes were impeded for a period that would significantly disrupt that migration;
- it would alter or destroy habitat in such a way that would prevent biological communities that inhabited the area prior to the project from reestablishing themselves;
- it would extensively alter or cause the loss of biological communities in high-quality habitat for longer than one year; or
- it allows biological resources to be exploited in ways inconsistent with the plans and policies of the ONMS or would otherwise violate the ONMS or NOAA program regulations.

The overall methodology, including data sources and assumptions, used to conduct the biological resources impact evaluation is consistent with the NOAA NEPA guidelines (NAO 216-6).

4.3.4 Environmental Consequences

Beneficial impacts resulting from proposed regulations that have the potential to improve water quality (and thus improve or protect habitats) are described in Section 4.2 (Physical Resources). See Section 4.2.4 for additional details.

Proposed Action

The proposed action is intended to provide additional protection to marine biological resources by expanding the sanctuary boundaries and applying sanctuary regulations and management plan actions to a larger area. As such, inclusion of this area within the sanctuary system would provide additional and complementary regulatory protection, human and financial resources for management, and would improve public awareness of the area's natural resource value and develop cooperative ways to maintain the area's ecosystem health. The larger presence the sanctuary would have in California's north coast, in conjunction with education and outreach strategies and activities outlined in the various management plan action plans, would foster increased awareness, collaboration and public regard for the marine resources both within and outside proposed sanctuary boundaries. This action is expected to have a beneficial impact on the biological resources within the expansion area.

Numerous regulations that are part of the proposed action would offer direct and/or indirect benefit to these valuable resources in the sanctuary expansion area by prohibiting activities that could be harmful, including taking or possessing wildlife, seabed disturbance, oil and gas development, vessel discharges, leaving a vessel adrift and release of introduced species. Also, limiting MPWC use and establishing Special Wildlife Protection Zones (SWPZs) for purposes of prohibiting overflight disturbance of wildlife and ensuring cargo vessels do not come near these areas all would contribute to beneficial impacts on biological resources.

Wildlife Protection and Introduced Species

Proposed regulations prohibit taking or possessing marine mammals, sea turtles and birds, consistent with other existing federal regulations (e.g., ESA, MMPA). The proposed sanctuary regulations may offer a slightly broader level of protection, especially for bird species, in the proposed expansion area.

The proposed prohibition of introduced species, with exceptions, would help minimize the risk of invasive introduced species that are detrimental to native biological species and ecosystems. Details on the types of impacts that introduced species may have on biological resources are provided in Section 4.2.1 (Affected Environment).

Discharges

Section 4.2 (Physical Resources) describes the proposed action's beneficial effects on marine water quality due to proposed regulations that would prohibit discharging within the sanctuary, with certain exceptions (e.g., clean graywater), and would also prohibit discharging or depositing any material or other matter from beyond the boundary of the sanctuary that subsequently enters the sanctuary and injures a sanctuary resource or quality. These regulations would have a beneficial impact on biological resources, by minimizing or reducing the likelihood of potentially harmful or toxic spills or discharges that could kill, injure or impair birds, marine mammals, fish and other resources. Indirect benefits would be expected from overall reduction of vessel discharges in the proposed expansion area.

Oil and Gas Development Prohibition

The proposed regulations would prohibit all oil and gas development within the existing and proposed sanctuary expansion area. There are no existing or planned oil and gas production facilities in the vicinity, but this prohibition would eliminate the potential for facilities to be installed within the expansion area and reduce the risk of oil or gas spills or other hazardous materials being deposited into sanctuary waters. This would result in a beneficial impact on biological resources in the expansion area.

MPWC Zones

Wildlife impacts from MPWC disturbance can include interruption of normal activity and alarm or flight; avoidance and displacement, loss of habitat use, decreased reproductive success, interference with movement, direct mortality, interference with courtship, alteration of behavior, change in community structure and nest abandonment (U.S. Dept. of Interior, 1998). As noted in Section 3.2 (Proposed Action Description), MPWC operators commonly accelerate and decelerate repeatedly and unpredictably, travel at rapid speeds and can maneuver close to rocks while motorboat operators generally transit through areas at steady speeds and bearings and slow down as they approach shore and offshore rocks. Thus, wildlife disturbance impacts from MPWC tend to be more severe than those from motorboat use, due to impacts in ecologically sensitive areas, often in nearshore locations. Establishing MPWC zones away from sensitive areas would provide a direct beneficial impact on biological resources.

Cargo Vessel and Overflight Regulations

Establishing two SWPZs (see Figure 3.2 8 and 3.2-9) near Gualala and Fort Ross in the GFNMS expansion area would provide added protection from potential future oil spills and disturbance to sensitive seabird and pinniped colonies. Cargo vessels would be prohibited from transiting closer than one nm of a SWPZ

to prevent wildlife disturbance and minimize the risk of oil spills in these areas, and aircraft would be prohibited from flying below 1,000 feet above ground level over a SWPZ. These two measures would result in direct beneficial impacts on biological resources. Within the existing GFNMS boundaries, the existing zones designated for cargo vessel buffers and overflight restrictions would be converted to SWPZs. The overall size and location would generally be the same as the existing protected areas. Since the SWPZ boundaries generally overlap the protected areas in the existing GFNMS, this change would not affect biological resources; sensitive areas within the existing sanctuary boundaries would continue to be protected.

Authorizations

For the existing sanctuaries, a proposed change in existing regulations would have the potential to result in minor adverse impacts, related to the new provision to allow authorizations for previously prohibited activities such as discharge, construction, drilling, dredging or other disturbance on submerged land, and several other activities. As described in Section 3.2 (Proposed Action Description), the authorization process would establish a mechanism for both sanctuaries to potentially allow new activities such as alternative energy projects, sewage outfalls, road construction, dredging to establish and maintain marinas, establishing new dredge disposal sites, coastal armoring, or construction of groins, jetties, piers and marinas. Most of these shoreline uses would only apply to the GFNMS. However, authorization of any such uses would be subject to the limitations established in proposed regulations, which provide a means for the sanctuary to require conditions on such activities to protect sanctuary resources. Therefore, this change would have the potential to result in limited adverse impacts, but only if a future activity is actually approved and constructed. Given the ability to condition a future project, the potential impact on biological resources in the existing CBNMS and GFNMS is considered less than significant. Moreover, any authorization considered would be subject to requirements under NEPA and would undergo the necessary environmental analysis and public review at that time.

The deletion of the exemption and authorization process for oil and gas-related pipelines in GFNMS would have no real impact on marine resources for two reasons. First, no oil or gas development projects are planned or reasonably foreseeable in the area, reducing the potential for pipelines to cross the sanctuary. Secondly, any authorization issued for pipelines would be subject to the terms and conditions that may be applied to protect sanctuary resources.

No Action Alternative

The No Action alternative would result in no new impacts on biological resources. The beneficial effects on biological resources from additional resource protection, as described for the proposed action, would not be achieved. Under the No Action alternative, the proposed expansion area would be without the sanctuary regulations that address threats from discharges, introduced species, seabed disturbance and potential future oil and gas development. However, existing agencies would continue to regulate certain aspects of water quality and biological resources.

Existing Regulations Alternative

Applying the existing CBNMS and GFNMS regulations to the entire expansion area would have beneficial effects similar to those described for the proposed action. This alternative would include the same prohibition on taking or possessing marine mammals, sea turtles and birds, as well as prohibiting seabed

disturbance, oil and gas development, vessel discharges, leaving a vessel adrift and release of introduced species. In addition, this alternative would prohibit MPWC use throughout the expansion area, which would provide an incremental increase in biological resources protection, compared to the proposed action. Furthermore, without an authorization process in CBNMS and GFNMS, there would be less potential for adverse impacts on biological resources. As described for the proposed action, the authorization provision potentially allows the sanctuaries to sanction otherwise prohibited activities, in limited circumstances.

Another difference between this alternative and the proposed action is that instead of establishing the two SWPZs in the expansion area and restricting cargo vessels and low flights near these zones, the four existing ASBS in the expansion area would serve the same purpose, as shown in Figure 3.4-1. In the existing GFNMS, cargo vessels and flights would be restricted, as they are currently are, near the Farallon Islands and the several existing ASBS. There would be no establishment of SWPZs in the existing GFNMS or the expansion area. Although applying existing regulations to the ASBS in the expansion area would provide beneficial impacts, the benefits would likely not be as substantial as the proposed action because the ASBS do not overlap sensitive seabird and pinniped areas and therefore would not fully protect sensitive wildlife from cargo vessels or low flying aircraft.

There would be no adverse or beneficial impact on biological resources in the existing sanctuaries, as the existing regulations would continue to be implemented.

Arena Cove Boundary Alternative

In addition to the beneficial effects described for the proposed action, to the extent that biological resources exist within the inner Arena cove, they would be afforded additional protection as described in the impacts of the proposed action by including this larger area within the sanctuary. This would result in a minor increase in beneficial biological resource impacts, relative to the proposed action or existing regulations alternative.

MPWC Zones Alternatives

There are three alternatives for two of the proposed action MPWC zones. The alternative MPWC zones differ slightly in size and shape from the zones described for the proposed action. Alternative Zone 2A would be only 0.2 sq nm larger than the proposed action Zone 2. Alternative Zone 2A would create an offshore buffer of 1000 feet to protect the nearshore environment and would allow access closer to coves between Moat and Saunders Landing and between Iversen Landing and Haven's neck. Alternative Zone 2B would be 1.9 sq nm larger than Zone 2 in the proposed action. There are some areas in Zone 2B where wildlife can rest or roost on rocks when the weather or tides allow, which could potentially cause a disturbance. Due to the rocky coastline, steep cliffs and powerful wave conditions, MPWC users will likely stay away from the nearshore, except when accessing the area from Arena Cove. This option also allows MPWC users to land at the two small beaches in this zone, in areas where there is not known breeding seabird colonies or pinniped pupping sites. Alternative Zone 4A is smaller than the proposed action zone and restricts shoreline access points, which would further limit potential impacts on wildlife and have a slightly higher level of beneficial impact on biological resources. Overall, the differences between the proposed action and alternatives for the MPWC zones are minor and beneficial impacts would be similar.

4.4 Commercial Fishing and Aquaculture

This section addresses commercial fishing resources and effects on the commercial fishing industry and aquaculture. The study area for commercial fisheries consists of the proposed expansion area of CBNMS and GFNMS and nearby waters, in which there are commercial fish resources and commercial fishing vessels operating, as well as the ports where those vessels land the majority of their fish. The study area for aquaculture is the proposed expansion area of CBNMS and GFNMS.

Primary information sources include the Jmpr FEIS (NOAA 2008), Marine Life Protection Act (MLPA) documents, Ecotrust documents and various CDFW databases that the reports draw on — notably the commercial fisheries landings data.

4.4.1 Regional Overview of Affected Environment

This section presents information for the study area, which was derived from the reported landings that occurred in the ports adjacent to the study area. The reported landings are an accurate descriptor of the pounds landed and ex-vessel revenues (the payment received at the point of landing for the catch) generated in the ports adjacent to the study area. These ports have been classified into four port complexes: Fort Bragg, Bodega Bay, San Francisco, and Princeton/Half Moon Bay area ports (Table 4.4-1). The port of Princeton/Half Moon Bay is normally included in the San Francisco Bay port complex, but for purposes of providing more area-specific information in this analysis, it is reported separately.

Table 4.4-1. Listing of Individual Ports by Port Group

Fort Bragg Area (51%)	Bodega Bay Area (29%)	San Francisco Bay Area (6%)	Princeton/Half Moon Bay (12%)
Albion	Bodega Bay	Alameda	Princeton/Half Moon Bay
Anchor Bay	Bolinas	Alviso	
Elk	Jenner	Berkeley	
Fort Bragg	Marshall	China Camp	
Gualala	Point Reyes	Emeryville	
Point Arena	Tomaes Bay	Oakland	
Westport		Richmond	
		San Francisco	
		Sausalito	

Source: California Fishery Information System (CFIS) database (CDFW 2013). Values were adjusted for inflation (2011 dollars).

Note: The number within the parentheses next to the port group indicates the average percent of ex-vessel revenue per port group (2000-2011). For each port group, the top port in terms of ex-vessel revenue is bolded.

Fishing Vessels

Data from 2000 to 2011 show that about 200 commercial fishing vessels make landings in the ports adjacent to the study area on an average annual basis (Figure 4.4-1). These are unique vessels, spanning all gear types. Table 4.4-2 shows the number of commercial fishing vessels that reported catches in each of the major port groups that are adjacent to the study area. Numerous vessels land a small proportion of the study area's landings and ex-vessel value (~ 2%) at ports to the north (e.g. Eureka) or to the south (e.g., Moss Landing or even as far south as San Diego). These vessels have been grouped into a port category named "Other Area" and are not further discussed in this analysis.

Table 4.4-2. Number of Commercial Fishing Vessels Reporting Catches at Major Port Groups

Year	Fort Bragg Area	Bodega Bay Area	San Francisco Area	Half Moon Bay Area	Other Areas	Totals
2000	72	115	22	16	19	204
2001	30	91	15	11	68	189
2002	129	103	28	11	11	227
2003	173	87	44	17	24	280
2004	147	79	47	25	11	260
2005	149	56	22	20	5	207
2006	83	131	28	39	14	235
2007	123	187	28	13	20	298
2008	32	37	11	5	3	77
2009	32	26	18	13	1	78
2010	33	60	12	5	4	103
2011	120	113	25	37	9	245

Source: CFIS database (CDFW 2013).

Due to intensive fishing of deep-water species (particularly groundfish) along the west coast, many fish populations declined in the years between 1980 and 2000. In response, regulations imposed by fisheries managers became more restrictive and the number of fishing vessels declined significantly between 1981 and 2003. For example, ports adjacent to the national marine sanctuaries on the central California coast (Monterey Bay, Gulf of the Farallones and Cordell Bank) experienced a drastic decline in the number of commercial vessels from 1980 to 2000 (NOAA 2008). In these sanctuaries, the number of vessels declined from approximately 3,200 vessels in the early 1980s to approximately 1,000 vessels in early 2000. Figure 4.4-1 illustrates a different decline that occurred in the study area in 2008–2010, when State and Federal fisheries managers imposed emergency closures in 2008 through 2010 on salmon fishing zones in California and Oregon to protect Sacramento River Chinook Salmon, then in a state of unprecedented collapse. Since the salmon season reopened in 2011 and 2012, the number of vessels has increased slightly above the average of 200 vessels for the area.

Ports

Fishing vessels catching fish in the study area come from all over California, with those port complexes nearest to the proposed expansion area, Fort Bragg area and Bodega Bay area, accounting for 80% of the catch (Table 4.4-1). The port complexes of Fort Bragg, Bodega Bay, San Francisco, and Princeton/Half Moon Bay account for more than 98% of the ex-vessel value captured from the study area. An extremely small percentage of the total catch from the proposed expansion area (~2%) is landed in ports further to the north and south, such as Crescent City, Moss Landing, Santa Cruz and Morro Bay.

Federal socioeconomic analyses conducted in 2006 by the Pacific Fishery Management Council (PFMC) and the National Marine Fisheries Service (NMFS) to consider the needs of fishing communities reported the following findings for several ports of the study area. The County of Mendocino, in which Fort Bragg is located, was classified as “most vulnerable” with high levels of dependence on commercial fishing and low levels of resilience. The town of Point Arena, also located within Mendocino County, was also

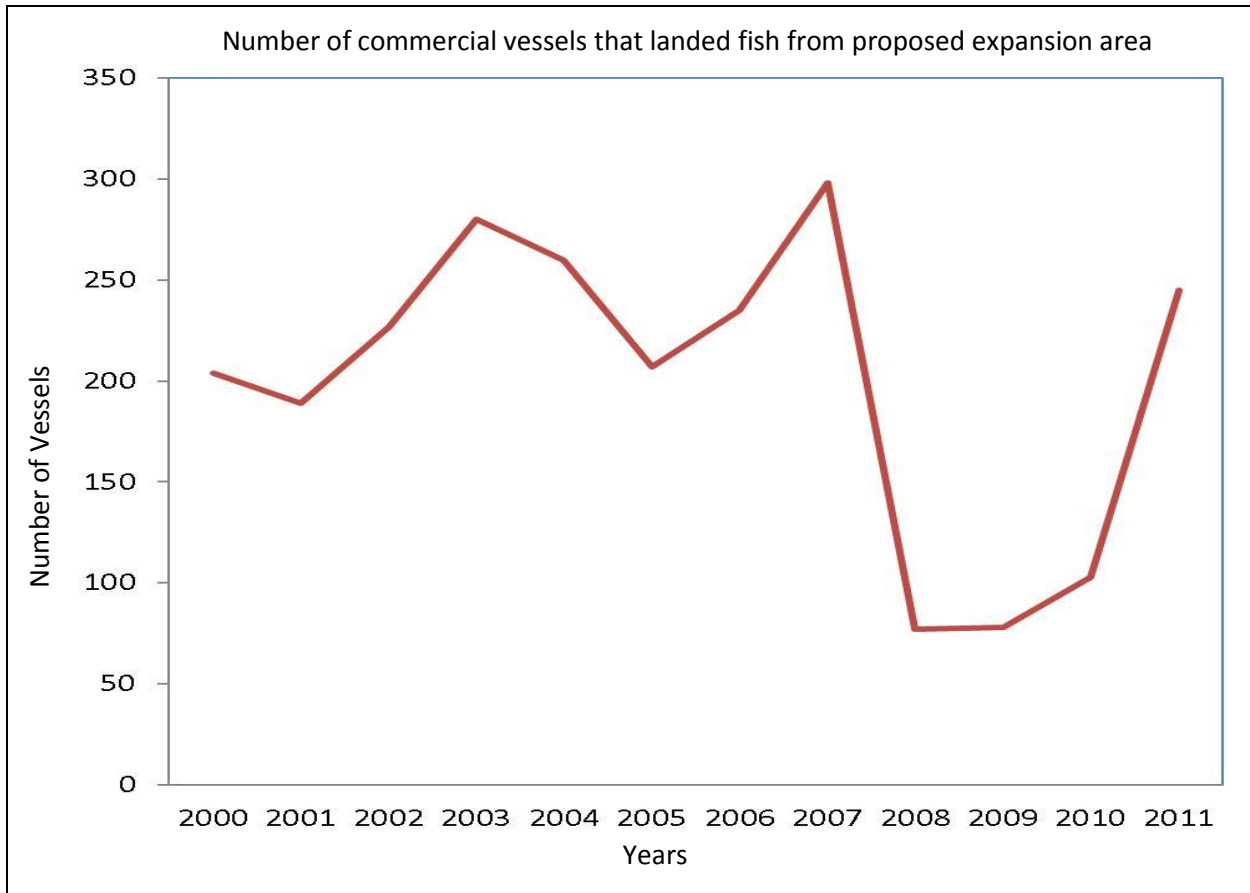


Figure 4.4-1. Number of Commercial Fishing Vessels Reporting Catches from the Proposed Expansion Area
Source: CFIS database (CDFW 2013).

classified as “vulnerable,” as was the village of Bodega Bay, located in Sonoma County. In the study, “vulnerable” also meant high levels of dependence on commercial fishing and low levels of resilience. The city of Oakland, within the San Francisco port complex, was classified as “vulnerable” with high levels of dependence on commercial fishing and low levels of resilience (PFMC and NMFS 2006).

Fishing Gear Types

CDFW identifies a variety of mobile and fixed gear types deployed by commercial fishermen off the California coast. However, only the following gear types (and the species they target) are commonly used in the study area (CDFG 2007):

- Trolling gear for salmon, groundfish or tuna,
- Pots/traps, predominantly for crab, but also for nearshore finfish and rockfish fishery,
- Set longlines for groundfish,
- Hook and line for nearshore finfish and rockfish fishery,
- Hookah gear (compressed air system) for divers harvesting red sea urchins,
- Trawl gear for groundfish (rockfish and flatfish),
- Round haul gear (e.g., purse seine, drum seine, lampara nets) for coastal pelagic species,
- Brail gear (i.e. scoop nets) for coastal pelagic species and
- Set gill nets for the Pacific Herring fishery.

Trolling gear, pots/traps, long lines, hook and line, and urchin harvest using hookah gear are deployed within State waters. Round haul and brail gear are deployed in state and federal waters for coastal pelagic species including Pacific Sardine, Northern Anchovy, and Market Squid. Trawl gear, demersal seine nets and gill nets are prohibited in State waters (within 3 nm) in the study area, but are used in federal waters (outside 3 nm) to target coastal pelagic species, California Halibut, and groundfish species (diverse rockfish species and a suite of flatfishes). The take of Pacific Herring for their roe is exempted from the gill net prohibition, and only gill nets may be used within State waters for the roe herring fishery.

Catch from bottom trawl gear began declining in the mid-1980s from 20 million pounds of groundfish landed to less than 10 percent of that nearly two decades later in early 2000. As the use of trawl gear declined the use of other gear types increased — notably hook and line gear (NOAA 2008).

Species Harvested

Commercial catch is reported either by species or, in certain cases, “market categories.” Market categories include a variety of similar species, or species commonly sold as a generic category of fish. In the California Commercial Landings for 2005-2006, 105 categories of fishes and 14 categories of invertebrates were landed in the Bodega Bay and San Francisco port complexes, and the Point Arena and Anchor Bay ports (not including estuarine categories that only occur outside the study region) (CDFG 2007). The categories constructed for the study area are based upon the species groups used in the profile reports for the MLPA study regions North-Central Coast and North Coast. A species is sometimes further categorized according to the gear type, because gear types affect the condition of the fish and therefore the market value. For years 2000 to 2011, the categories in order of pounds landed (largest to smallest) are red urchin; Dungeness crab; Dover Sole, Thornyheads and Sablefish caught with trawl; salmon (Chinook and Coho); market squid; coastal pelagics (Pacific Sardine, Northern Anchovy, Jack Mackerel, and Pacific Mackerel); shelf and slope rockfish, which are the rockfish taken in deeper waters of the continental shelf and slope (Aurora, Bank, Blackgill, Bocaccio, Bronzespotted, Canary, Chilipepper, Cowcod, Darkblotched, Flag, Greenblotched, Greenspotted, Greenstriped, Mexican, Pacific Ocean Perch [UC], Pink, Pinkrose, Redbanded, Redstriped, Roughey, Sharpchin, Shortraker, Splitnose, Stripetail, Tiger, Vermilion, Widow, Yelloweye, Yellowmouth, and Yellowtail); flatfish other than Sanddab or Dover Sole (e.g. Starry Flounder), Sablefish non-trawl; tuna; shallow nearshore complex of Cabezon, Monkeyface Prickleback, Scorpion Fish and rockfishes (Black and Yellow, China, Gopher, Grass and Kelp); sharks and rays, except White Shark and Big Skate; Lingcod; California Halibut; spot prawn; deeper nearshore rockfish (Black, Brown, Olive, Copper, Treefish, Blue, Quillback); Hagfish; Herring; Surfperch; Swordfish; Dover Sole non-trawl; and smelt.

Catch Values and Quantities

Figure 4.4-2 presents total catch amount and ex-vessel values for the ports adjacent to the study area for 2000–2011. Total landings and ex-vessel revenue have steadily improved in the 11-year period, from a low in 2000 of 0.6 million pounds and \$1.1 million to more than six-fold increase in 2011 of 3.8 million pounds landed and ex-vessel revenues of \$6.67 million. The total catch experienced a decline in the period 2004 through 2006, when it dipped to 0.95 million pounds and ex-vessel revenues to \$1.79 million. Since that time period, landings and ex-vessel revenues have rebounded to the high of 2011. The contrast between ex-vessel revenue and total catch in 2008–2010 indicates a probable shift to relatively higher

volume, but lower value fisheries, or a decrease in the average value (per pound) of fish caught in the study region.

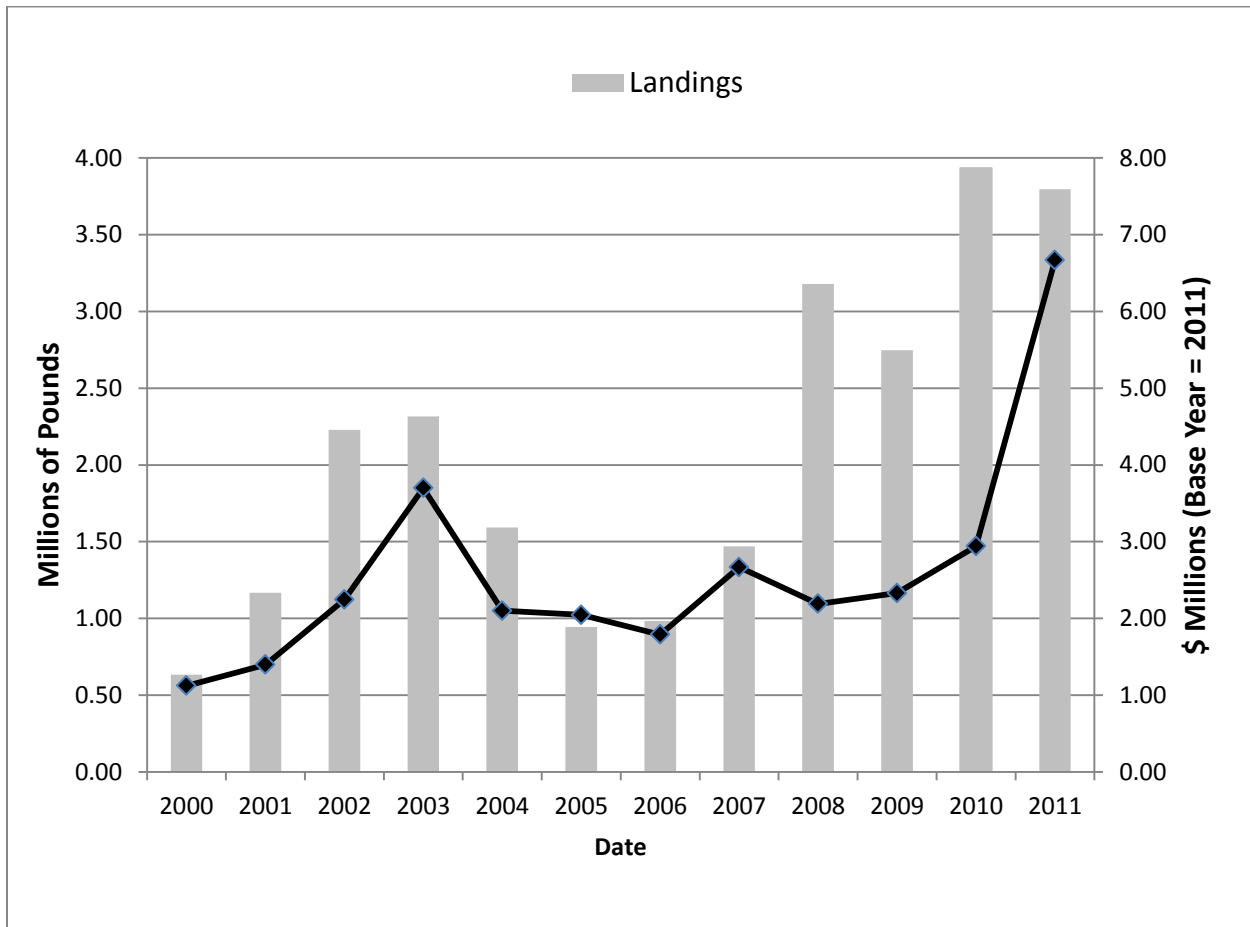


Figure 4.4-2. Total Landings and Ex-vessel Revenue Reported to the Ports of the Study Area, 2000-2011
Source: CFIS database (CDFW 2013). Values were adjusted for inflation (2011 dollars).

Table 4.4-3 summarizes CDFW data for all landings and value by select species groups for the study area. The table is sorted according to three years spanning the 2000–2011 time period and captures a select group of fisheries within the top twelve species or species groups for 2000, 2005 and 2011. Dungeness crab, salmon and red urchin consistently score in the top high value fisheries from 2000 to 2011. Even in the period of decline, represented by 2005, when several top species are not even represented in the total catch, Dungeness crab, salmon and red urchin continued to be within the top three landings and ex-vessel revenues. Although the red urchin fishery continues to be well represented in the total landings of the study area, its value has been in decline, particularly in the period from 2000 through 2007 (Ecotrust 2008). The salmon fishery has experienced an increase in value as stock productivity and management regime have dictated a decrease in landings. In any year the value of a fishery is related to the stock, price, and fishery management.

Table 4.4-3. Selected Top Ex-vessel Revenue Producing Species/Species Groups Reported to the Ports of the Study Area, Pounds and Ex-vessel Value, 2000, 2005, 2011

<i>Species Group</i>	<i>2000</i>		<i>2005</i>		<i>2011</i>	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Salmon	132,833	\$439,260	358,357	\$1,418,374	136,129	\$ 701,623
Dungeness crab	44,851	153,247	120,386	237,271	1,715,432	4,174,976
Red urchin	109,718	101,442	428,462	228,413	501,630	355,975
DTS trawl*	67,275	31,897	—	—	530,597	494,721
Sablefish non-trawl	968	1,571	819	1,465	98,582	444,882
Shelf Rockfish	146,130	141,868	8,969	55,026	78,217	92,540
Market squid	78,788	7,718	—	—	555,111	139,098
Spot prawn	4,451	50,949	—	—	693	7,891
Tuna	5,894	8,009	3,799	6,108	44,416	65,651

Source: CFIS database (CDFW 2013). Values were adjusted for inflation (2011 dollars).

*DTS trawl: Dover sole, Thornyheads, and Sablefish complex harvested with trawl gear. Blanks in the table are true zeroes.

Groundfish and herring historically dominated landings from Bodega Bay to Half Moon Bay in the 1980s to the mid-1990s (NOAA 2008). A herring fishery is not expected to be pursued in the study area given the lack of suitable habitat. However, there is ample suitable habitat for a groundfish fishery. Yet, the representation of groundfish landings is much diminished in 2000–2011. Figure 4.4-3 demonstrates the diminished presence of groundfish landings from the study region. Only in recent years has the Dover Sole, Thornyheads, and Sablefish (DTS) complex captured with trawl gear (a complex comprised of groundfish species) been represented in the top five fisheries landed. Figure 4.4-3 clearly illustrates the prevalence of red urchin fishery, even with diminished value, throughout 2000–2011, followed by a steady presence of Dungeness crab landed. The salmon fishery is stronger in the first part of the period, showing a small resurgence in landings in 2011. These variations in landings are a result of market fluctuations, environmental factors and regulatory conditions.

Environmental Factors

Commercial fisheries in the study area are influenced by the oceanography of the California Current and the coastal topography of the area (capes, canyons and offshore banks). The California Current is an eastern boundary current that produces some of the most intensive wind-driven upwelling in the world. Upwelling at capes, such as Point Arena, produce jets that are diverted offshore, which in turn frequently create eddies, fronts and other mesoscale changes in the physical and biological conditions and productivity over multiple time scales (Parrish et al. 1981, Mann and Lazier 1996, Hickey, 1998). Food webs in these types of upwelling ecosystems tend to be structured around coastal pelagic species (e.g. Pacific Sardine and Northern Anchovy) that exhibit boom-bust cycles over decadal time scales (Bakun 1996, Checkley and Barth 2009, Fréon et al. 2009).

Much of the interannual variability in productivity of this ecosystem is influenced by shifting water masses of the California Current, with the El Niño/Southern Oscillation (ENSO) and Pacific (inter) Decadal Oscillation (PDO) introducing important changes in ocean conditions and productivity at slower rates; see Section 4.2 (Physical Resources) and Section 4.3 (Biological Resources) for additional information.

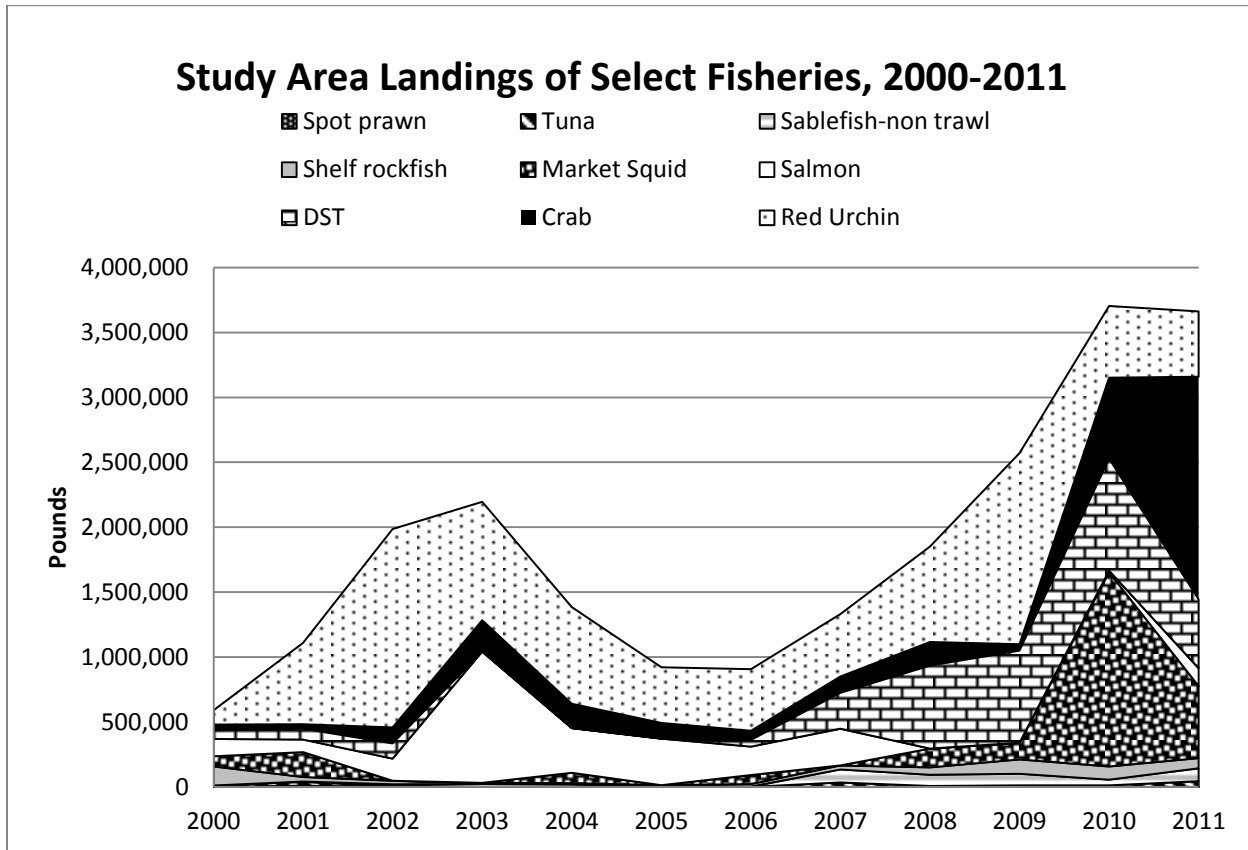


Figure 4.4-3. Landings of Select Fisheries from the Study Area, 2000-2011
Source: CFIS database (CDFW 2013). Values were adjusted for inflation (2011 dollars).

Aquaculture/Mariculture

NOAA developed a Marine Aquaculture Policy in June 2011 and defines aquaculture as “the propagation and rearing of aquatic organisms for any commercial, recreational, or public purpose.” This definition covers all production of finfish, shellfish, plants, algae, and other marine organisms for (1) food and other commercial products; (2) wild stock replenishment for commercial and recreational fisheries; (3) rebuilding populations of threatened or endangered species under species recovery and conservation plans; and (4) restoration and conservation of marine and Great Lakes habitat (NOAA 2011). As described in the policy, besides engaging in regulatory actions in the Exclusive Economic Zone under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (commonly referred to as the Magnuson-Stevens Act [MSA]), through Fishery Management Plans for species in need of conservation and management, NOAA may also engage in regulatory action under NMSA authority with respect to aquaculture activities within or potentially affecting national marine sanctuaries. NOAA has a direct regulatory role for aquaculture within the sanctuaries, in both State and federal waters, except in State waters when limited by formal written agreement with the Governor of that state. The proposed expansion area would be subject to any aquaculture-related regulations promulgated by NOAA, if incorporated into the sanctuary boundaries.

Commercial aquaculture has existed in the State of California since 1850 (NOAA 2008). No commercial aquaculture operations are currently conducted in the study area. Most marine aquaculture is currently

conducted in sheltered bays to the north and south of the study area such as Arcata Bay, Drakes Estero, Tomales Bay, Morro Bay and Agua Hedionda (Conte and Moore 2001), or in harbors, also sheltered, such as Monterey harbor. Various species are cultivated, including Pacific oyster (*Crassostrea gigas*), Kumamoto oyster (*C. sikamea*), Sumino oyster (*C. rivularis*), Eastern oyster (*C. virginica*), European flat oyster (*Ostrea edulis*), native oyster (*O. conchaphila*), Manila clam (*Tapes japonica*), Pacific littleneck clam (*Protothaca staminea*), rock scallop (*Hinnites giganteus*), California sea mussel (*Mytilus californianus*), bay mussel (*M. edulis*), and red abalone (*Haliotis rufescens*). Aquaculture of salmonids, exotic finfish and transgenic species (genetically modified species) is currently prohibited by the State of California.

4.4.2 Regulatory Overview

Commercial fisheries in the study area are regulated by the PFMC, NMFS, the California State Legislature and the California Fish and Game Commission. Coastal fisheries in State waters (up to 3 nm from the shoreline) are generally managed by the CDFW. NMFS and PFMC regulate and manage ocean fisheries beyond State waters (from 3 nm offshore to the extent of the EEZ, 200 nm offshore). In federal waters NOAA, U.S. Army Corps of Engineers, EPA, DOI, USDA and the U.S. Department of Health and Human Services all have various jurisdictional oversight over aquaculture facilities and operations. Jurisdiction over aquaculture in State waters is addressed below. There is also pending legislation relating to aquaculture in offshore waters.

See Section 4.2 (Physical Resources) for a summary of water quality and vessel discharge requirements.

Federal Regulations

Magnuson-Stevens Fishery Conservation and Management Act (MSA), 16 U.S.C. §§ 1801-1882

General Provisions

The MSA, is the primary federal law governing marine fisheries management in the United States. The MSA was enacted in 1976 and has been amended many times over the years with a notable revision in 1996 including provisions to minimize bycatch (the incidental harvest of non-target species), promote protection of essential fish habitat, and catch and release in recreational fishing. The 1996 MSA revision is often referred to as the Sustainable Fisheries Act or SFA. Revisions in 2006 required an end to overfishing and to prevent overfishing through annual catch limits and accountability measures. The 2006 MSA revision is commonly referred to as the Magnuson-Stevens Reauthorization Act or MSRA.

The PFMC is one of eight regional fishery management councils established by the MSA. Over the last 30+ years, the PFMC has developed four fishery management plans (FMPs) and has addressed a wide range of fisheries issues through amendments to those plans. The four FMPs are focused on groundfish, salmon, coastal pelagics and highly migratory species. The Groundfish FMP covers over 90 species of rockfish, flatfish, roundfish, sharks, skates, and others. Chinook and Coho are the primary salmon species addressed in the Salmon FMP, while Northern Anchovy, Market Squid, Pacific Sardine, Pacific Mackerel, and Jack Mackerel are specified in the Coastal Pelagic Species FMP. Finally, the Highly Migratory Species FMP authorizes the PFMC to actively manage tunas (North Pacific Albacore, Yellowfin, Bigeye, Skipjack, and Northern Bluefin), sharks (Common Thresher, Pelagic Thresher, Bigeye Thresher, Shortfin, Mako, and Blue) billfish/swordfish (Striped Marlin, Pacific Swordfish) and other highly migratory fishes (Dorado). The PFMC also participates in international fishery management organizations such as the International

Pacific Halibut Commission, and international commissions tasked with managing migratory tunas (Albacore, Yellowfin and other highly migratory species).

Groundfish Management

The Groundfish FMP contains the rules for managing the groundfish fishery. It outlines the areas, species, regulations, and methods that PFMC and NMFS must follow to make changes to the fishery. A biennial management process was implemented in 2003 through amendment 17 to the FMP. The biennial cycle implements management measures for a two-year period, rather than just for one year. Separate harvest specifications (allowable biological catch and optimum yield) are identified for each year in the two-year period. This cycle provides more time for PFMC and NMFS to work on other critical groundfish issues, and more time for public comment (NOAA 2006).

Groundfish are managed through numerous management measures including harvest guidelines, quotas, trip and landing limits, area restrictions, seasonal closures, and gear restrictions (such as minimum mesh size for nets and small trawl footrope requirements for certain areas). The trawl sector of the groundfish fishery recently shifted to an individual fishing quota (IFQ) system and harvest co-operative program that was implemented in 2011. This program is expected to reduce harvest capacity in the fishery, to make the trawl sector of the fishery more efficient, and to lower bycatch from trawl gear. All sectors of the groundfish fishery are currently constrained by the need to rebuild groundfish species that have been declared overfished (Canary Rockfish, Yelloweye Rockfish, Darkblotched Rockfish, Bocaccio, Pacific Ocean Perch, Cowcod and Petrale Sole). Rebuilding plans have been developed to help these species recover. Because of the low available harvest of species managed under rebuilding plans, the overall groundfish harvest has been significantly reduced.

Since 2003, several groundfish conservation areas have been implemented through regulation by NMFS to reduce overfishing on various groundfish species (NOAA 2006). A groundfish conservation area is defined by NMFS as “any closed area intended to protect a particular groundfish species or species group or species complex.” The Rockfish Conservation Areas (RCA) are the only groundfish conservation areas in the study area. The RCAs are large area closures intended to protect overfished shelf rockfish species (e.g. Canary and Yelloweye Rockfish). The RCAs have boundaries defined by specific latitude and longitude coordinates that approximate depth contours over the shelf and differ between gear types, for example trawl, non-trawl and recreational RCA, which vary throughout the year with cumulative limit periods. A core area over the shelf has been protected for more than a decade.

Based on recommendations within amendment 19 of the Pacific Coast Groundfish fishery management plan, in 2006 NMFS implemented essential fish habitat (EFH) for groundfish. To minimize impacts on ecologically important habitats of groundfish EFH, NMFS implemented areas closed to bottom trawl gear or all bottom contact gear (trawl and other bottom tending gear). There are currently 50 such closed areas on the west coast and three bottom trawl closed areas within the study area: Point Arena North and Point Arena South Closed Areas and portions of the Bottom Trawl Footprint Closure. The latter covers all areas westward of the 1280 m (700 fathom) contour out to the 3500 m (1914 fathom) contour, within the EEZ. The Bottom Trawl Footprint Closure was designed to minimize adverse fishing effects on EFH, by freezing the footprint of where trawling occurred in 2004. The PFMC is currently in the process of reviewing and updating groundfish EFH.

State Regulations

Marine Life Management Act

California's Marine Life Management Act (MLMA), which became law on January 1, 1999 (codified in scattered sections of the California Fish and Game Code), regulates the harvest of California's marine living resources, including commercial fisheries. The fishery management system established by the MLMA applies to four groups of fisheries:

1. The nearshore finfish fishery and the White Seabass fishery;
2. Emerging fisheries – new and growing fisheries that are not currently subject to specific regulation;
3. Those fisheries for which the Fish and Game Commission held some management authority before January 1, 1999. Future regulations affecting these fisheries will need to conform to the MLMA; and
4. Those commercial fisheries for which there is no statutory delegation of authority to the Fish and Game Commission and Department.

The California Aquaculture Development Act

The California Aquaculture Development Act of 1979 established the California Department of Fish and Wildlife (CDFW, formerly the California Department of Fish and Game) as the lead agency for aquaculture in the state. In 1982, legislation was passed that provided guidelines and authority for aquaculture regulations developed by the Fish and Game Commission. These guidelines and authority for aquaculture regulations are in California Code of Regulations, Title 14, Natural Resources: Division 1. Fish and Game Commission – Department of Fish and Game. These regulations are referred to as Title 14. CDFW is responsible for issuing leases and permits for specific aquaculture activities and coordinating with two committees, the Aquaculture Development Committee and the Aquaculture Disease Committee, which exist for the purpose of interaction among sectors of the aquaculture industry and government regulatory agencies.

There are several other State agencies that have regulatory authority over certain aspects of aquaculture. They include the California Departments of Health Service and Food and Agriculture (disease and health), the California State Lands Commission (CSLC) (leased lands), the California Coastal Commission (coastal uses and public recreation and access), and the State Water Resources Control Board (water quality).

4.4.3 Impact Assessment Methodology

Criteria to determine the significance of impacts on commercial fisheries are based on fisheries population benchmarks as defined by federal and state standards and regulations and social and economic factors. Impacts may be either direct or indirect and they may be short term or long term. Short-term impacts are generally not considered significant, by definition. Impacts are considered to be significant if proposed actions would result in the following:

- Reduced the number of fishing vessels allowed to fish in the area;
- Resulted in a substantial positive or negative population trend in one or more of the harvested species such that the population would be below sustainable fishing levels, as defined by fishery management plans for that species;

- Resulted in substantial economic gain or loss to commercial fisheries; or
- Conflicted with the policies and regulations established by the MSA.

The impact analysis for the commercial fisheries resources considered the potential impacts of each relevant component of the proposed action on population dynamics of commercial fish species and any operational, social, or economic impacts on the commercial fishery. Any potential impacts were compared to the significance criteria outlined above to determine if adverse impacts are expected from the proposed actions.

4.4.4 Environmental Consequences

The relevant proposed and alternative regulations and potential consequences are outlined in the following sections. The discussion is focused on regulations that would have the potential to affect commercial fishing operations or the fish populations on which the fishing industry depends.

Proposed Action

Proposed sanctuary regulations do not restrict commercial fishing practices and are therefore not expected to cause significant adverse impacts on commercial fishing resources or cause significant economic loss to commercial fisheries. However, prohibitions on vessel discharges, submerged lands disturbance, with the exception of lawful fishing activities, oil and gas exploration, introduced species, deserting vessels and, the establishment of MPWC zones may have implications for positive population trends of harvested species and commercial fisheries. The prohibitions on oil and gas exploration and submerged land disturbance are expected to provide long term beneficial ecosystem and habitat impacts that healthy commercial fisheries depend on, while select vessel discharge regulations have the potential to cause short term adverse impacts on fishing vessel operations such as fuel, time, or equipment upgrade costs that are expected to be less than significant, as described below.

Discharge Regulations

GFNMS and CBNMS have two proposed regulations related to discharges of material that would be extended into the study area that may affect commercial fishing: prohibitions on discharging or depositing of matter or materials within the sanctuaries, and from beyond the boundary of the sanctuaries that subsequently enters the sanctuaries and injures a sanctuary resource or quality. Discharge regulations affect the treatment of sewage and other materials associated with vessel operations, and may therefore result in adverse impacts on commercial fishing operations, but may also provide improvements to water quality and ecosystem health, on which thriving fish populations depend.

Current State and federal regulations limit different types of discharges into the waters of the expansion area so the addition of sanctuary regulations represents an incremental increase in restrictions on vessel discharges.

CBNMS and GFNMS regulations would prohibit in the expansion area the discharge or deposit of any matter or material from vessels within or into the sanctuary waters. The exceptions to this prohibition are:

- Fish, fish parts, chumming materials or bait used in lawful fishing activities;
- Clean effluent generated incidental to vessel use by an operable, approved Type I or II marine sanitation device (MSD) (applies to vessels less than 300 gross registered tons (GRT) or vessels 300 GRT or greater without sufficient capacity to hold sewage while in a sanctuary);

- Clean vessel deck wash down, vessel engine cooling water, vessel generator cooling water, and bilge water;
- Anchor wash; or
- Vessel engine or generator exhaust.

In addition, the proposed action includes a regulatory change for both CBNMS and GFNMS, to add an exception to the existing discharge prohibition to allow discharge of clean graywater, as defined by section 312 of the Federal Water Pollution Control Act (known as the Clean Water Act or CWA), from vessels less than 300 GRT and from vessels 300 GRT or greater without sufficient capacity to hold graywater within the sanctuaries. As per section 312 of the CWA, graywater includes galley, bath and shower water. Clean means not containing detectable levels of harmful matter; any graywater containing detectable levels of harmful matter could not be discharged into CBNMS and GFNMS and the expansion area under the proposed action.

Currently, in the expansion area, as described in Section 4.2 (Physical Resources), the USEPA established a No Discharge Zone (NDZ) for marine waters within 3 miles of the coastline (the territorial sea, as defined in the CWA), prohibiting discharge of treated and untreated sewage from: all large passenger vessels of 300 gross tons or greater; and from large oceangoing vessels of 300 gross tons or greater with available holding tank capacity or containing sewage generated while the vessel was outside of State waters (USEPA 2012). Section 312 of the CWA (33 U.S.C. § 1322) requires the use of MSDs for all vessels within 3 miles of the coast if equipped with an installed toilet. Vessels 65 feet (20 meters) and under may use a Type I, II, or III MSD. Vessels over 65 feet in length must have a Type II or Type III MSD. Smaller vessels may handle sewage by having portable toilets, portable sewage receptacles, or no toilet facilities (for these instances the use of an MSD is not required). Beyond 3 miles from shore, under current federal regulations, vessels may discharge treated or untreated sewage from any type of MSD. Discharge of untreated sewage throughout the sanctuaries would be prohibited under the regulations of the proposed action.

As per Coast Guard requirements, which enforce provisions of the CWA, all commercial fishing vessels within 3 miles of the coast with installed toilets are already required to have MSDs. Implementation of the proposed action would mean vessels transiting sanctuary waters beyond 3 miles of the coastline with installed toilets could discharge clean effluent (sewage) generated incidental to vessel use by a Type I or Type II MSD, or hold the waste in a Type III MSD (required for vessels 300 GRT and above with capacity to hold the waste). Vessels over 65 feet could only discharge through a Type II MSD. Vessel operators would be required to lock all MSDs in a manner that prevents discharge or deposit of untreated sewage.

For smaller vessels without a MSD (because they do not have an installed toilet), beside discharge of sewage outside sanctuary boundaries, discharge of sewage from a portable toilet or other sewage container into a dump station or other on-shore sewage disposal facility would be an option under the proposed action. Should a vessel owner or operator choose to install an MSD, there would be one-time costs for purchase of the device and installation, and periodic costs for maintenance, and should a dump station or other onshore sewage disposal facility be used, there would be a cost (money and/or time) each time to dispose of sewage from the vessel. Due to these factors, the proposed action has the potential to cause some adverse effects on individual commercial fishing operations. While it is not possible due to lack of

data to estimate the number of commercial fishing owners or operators that would choose these options, the number is expected to be low.

There is no way to accurately estimate costs for installing MSDs due to the wide range of vessel and MSD designs and varying labor costs. The costs of pumping out a commercial fishing or recreational vessel vary. Spud Point Marina's pump-out facility is free, per its website. The mobile pump-out prices vary depending on how far they have to travel to do the pump-out, if there are other customers that wish to also have a pump-out, and possibly volume pumped. Dump station fees could range from free to registered guests of a campground to a small fee per dump in other instances, such as from \$5 to \$15 (varies by facility and location). Dumping the contents of a portable toilet into a sewage receptacle (such as a toilet) would likely be free.

For vessels that hold waste in a MSD Type III and do not have a MSD Type I or II, transit times to reach areas for legal discharge may be a factor. Currently, commercial fishing vessels of 300 gross tons or greater that have available holding capacity must transit to outside 3 miles to discharge sewage from holding tanks into the ocean. The proposed sanctuary regulations would require all commercial fishing vessels that have only a Type III MSD (holding tank) to either hold their waste for the additional amount of time it would take to transit the expansion area before discharge outside of national marine sanctuary boundaries or to visit pumpout or dump station facilities. Both these options would incur additional costs to vessel owners or operators in terms of fuel and time. A vessel owner or operator also has the option to install an MSD I or II in order to release clean effluent as per proposed regulations. Choosing this option would incur a one-time cost for purchase of the device and installation, and periodic costs for maintenance. For commercial fishing vessels transiting the expansion area, these vessels would already be expending the fuel necessary to travel through the expansion area on the way to their destinations outside sanctuary boundaries. Under normal circumstances, they would incur no additional fuel costs, would move through the expansion area in a few hours, and would have the capacity to hold sewage during that time.

Overall, the impact on commercial fishing vessels from the prohibitions on sewage discharge from an MSD III has the potential to cause an adverse impact on individual commercial fishing operations if a vessel owner or operator purchases and installs an MSD I or II, or transits long distances to reach a pumpout facility or areas outside of national marine sanctuary boundary to properly dispose of sewage. It is not possible, due to lack of data to estimate the number of commercial fishing owners or operators that would need to choose these options, the number is expected to be low and therefore the impacts are considered less than significant.

The proposed sanctuary regulations on discharges also affect other vessel discharges beyond discharge of sewage and include but are not limited to, discharge of graywater, bilge water, and solid waste.

Graywater discharges from commercial fishing vessels, until recently, were exempt from the NPDES vessel program, known as the 2008 Vessel General Permit (VGP). The amended 2013 VGP, which went into effect on December 19, 2013, does not extend the exemption to commercial fishing vessels; commercial fishing vessels are eligible for coverage under the VGP. As of December 8, 2011, a small Vessel General Permit (sVGP) has been proposed by the USEPA (but not finalized as of August 2013), to cover all vessels (except recreational and vessels of the Armed Forces of the United States) less than 79 feet in length; a number of fishing vessels are in that size class. According to the 2013 VGP, graywater mixed with sewage

discharges from oceangoing vessels of 300 gross tons with sufficient holding capacity are prohibited in State waters (a California-specific VGP requirement). Under the VGP, vessels greater than 400 gross tons that regularly travel more than one nm from shore that have the capacity to store graywater for a sufficient period, graywater must be discharged greater than one nm from shore while the vessel is underway, unless they meet treatment standards and other requirements of the VGP. Vessels that do not regularly travel more than one nm from shore should minimize the discharge of graywater and, provided the vessel has available graywater storage capacity, must dispose of graywater onshore if appropriate facilities are available and such disposal is economically practicable and achievable.

As described above, the proposed sanctuary regulations for discharges have an exception for clean graywater discharges, for vessels less than 300 GRT and vessels 300 GRT or greater without sufficient capacity to hold graywater in all waters of the expansion area and the existing GFNMS and CBNMS boundaries. Graywater containing detectable levels of harmful matter could not be discharged in the expansion area or existing sanctuaries. Similar to the holding tank capacity issue for sewage discussed above, commercial fishing vessels with holding tanks for graywater would be expected to store graywater that contained detectable levels of harmful matter in holding tanks and either transit beyond the boundaries of the expansion area to discharge it, incurring fuel and time costs, or they would need to access a pumpout facility, incurring fuel and time costs to reach the pumpout facility and possibly a cost each time to pump out graywater. Vessel owners without sufficient capacity to hold graywater, provided that it did not meet the definition of clean, could consider upgrading their holding tank capacity. For commercial fishing vessels transiting the expansion area, these vessels would already be expending the fuel necessary to travel through the expansion area on the way to their destinations outside the boundaries. Under normal circumstances, they would incur no additional fuel costs, would move through the expansion area in a few hours, and would have the capacity to hold graywater containing detectable levels of harmful matter during that time.

Overall, the prohibition on graywater discharges that do not meet the definition of clean has the potential to cause an adverse impact on individual commercial fishing operations if a vessel owner or operator chooses to upgrade holding tank capacity or is required to transit long distances to reach a pumpout facility (which could entail a cost each time to use) or areas outside of national marine sanctuary boundary to properly dispose of graywater. Should a vessel owner or operator choose to upgrade holding capacity, there would be one-time costs for purchase of the equipment and installation, and periodic costs for maintenance. While it is not possible, due to lack of data to estimate the number of commercial fishing owners or operators that would need to choose these options, the number would likely be limited, and therefore the impacts are considered less than significant.

As per the Oil Pollution Act and the CWA, vessels are prohibited from releasing any discharge, bilge or other, with an oil content greater than 15 parts per million within 12 nm (14 miles) of land; or bilge water has an oil content greater than 100 ppm and the vessel is beyond 12 nm of land. Vessels of 300 gross tons or more may not release oily bilge water within State waters.

Proposed sanctuary regulations for the expansion area would prohibit the discharge of bilge water with the exception of clean (free of harmful matter) bilge water. Commercial fishing vessels are already required to adhere to clean bilge discharges according to the Oil Pollution Act and CWA within the expansion area, with stricter requirements for bilge discharges within 12 nm. It is expected they could refrain from

discharging any non-clean bilge water in the entire expansion area and that there might be minor impact of the proposed regulation on bilge water discharges from commercial fishing vessels.

Solid waste is another type of discharge from vessels that occurs in the expansion area and includes food waste, cans, glass, wood, cardboard, and paper. The Act to Prevent Pollution from Ships (APPS) and CWA regulate solid waste discharge, while the International Convention for the Prevention of Pollution from Ships (MARPOL) regulates the disposal of plastics and garbage. Under these regulations, the disposal of plastics is prohibited in any waters and disposal of other materials are prohibited within 12 nm of the coast. Other garbage, such as food waste, paper and metal may be disposed of beyond 12 nm, with disposal of garbage ground to pieces under an inch allowed beyond 3 nm from shore.

Commercial fishing vessels discharging fish, fish parts, chumming materials or bait as part of lawful fishing activities are exempt from the proposed sanctuary regulations. In addition, discharge of plastics in the expansion area is currently prohibited, so there would be no additional impact on commercial fishing vessels from the proposed regulations regarding plastic discharge. The amount of food waste generated by commercial fishing vessels during transit of the expansion area would not impact the ability of the vessels to store it and discharge it onshore or once outside the sanctuary, beyond 3 nm from shore (ground garbage) or 12 nm from shore (unground garbage).

Because commercial fishing operators are already expected to adhere to the regulatory regime for disposal of most solids within 12 nm, it is expected they can adhere to the proposed sanctuary regulations for the incrementally larger area that would result from expanding the sanctuary boundaries with minor impacts to their operations. Vessel owners could choose to take measures to reduce on-board waste streams or upgrade equipment if additional storage capacity was needed, which could involve changes to vessel waste generation practices, one-time equipment costs, and maintenance costs. While such measures have the potential to cause some adverse effects, the proposed action's overall effects on the commercial fishing industry would be less than significant.

Finally, commercial fishing vessels would only be allowed to use “clean” (free of harmful matter) materials in deck or anchor washing if they wish to allow the washings to drain into the sanctuaries. Adhering to this requirement is not expected to cause adverse impacts on operations of commercial fishing vessels.

The beneficial water quality impacts that result collectively from sanctuary discharge regulations would likely have minor benefits for commercial fish species within the expansion area. Fish species would be exposed to fewer contaminants and bacteria, and would therefore potentially have a reduced risk of health problems. Better water quality would also create better habitat in the long term, which would benefit fish populations and potentially result in increased reproductive success and increases in population sizes.

The second discharge regulation prohibits discharging or depositing any material or other matter from beyond the boundary of the sanctuary that subsequently enters the sanctuary and injures a sanctuary resource or quality. The exceptions to this proposed regulation are the same exceptions as for discharging or depositing within the sanctuary, including discharges for fish, fish parts and chumming, as part of lawful fishing activities. Similar to the first discharge regulations discussed in this section, this proposed regulation would have minor beneficial impacts on fish species populations and their respective commercial fisheries from a decrease in pollution entering and impacting sanctuary resources, including fish. The proposed

regulations have the potential to cause adverse impacts on commercial fishing operations as there may be instances when commercial fishing owners or operators may need to store wastes that contain harmful matter (as defined in the proposed regulations) and dispose of them onshore or farther from the sanctuary, if the wastes could enter the sanctuary and cause injury to sanctuary resources. However, these requirements would have minimal impacts on commercial fisheries. Overall, the improvements in water quality and associated benefits would have minor beneficial impacts to fisheries.

In summary, extending discharge regulations into the expansion area would have long term, minor beneficial impacts on commercial fish species and their habitat but may have short term adverse impacts on individual commercial fishing operators, particularly from prohibitions of sewage and, to a lesser extent, from graywater discharges containing detectable levels of harmful matter. The proposed regulatory change has the potential to cause limited economic loss to individuals within the commercial fishing industry; therefore, it is considered to create a less than significant adverse impact on commercial fisheries.

Submerged Lands Regulations

Extending existing regulations to the study area would include a prohibition on drilling into, dredging, or otherwise altering the submerged lands; or constructing, placing, or abandoning any structure, material or matter on the submerged lands, except as incidental and necessary for anchoring any vessel or lawful use of any fishing gear during normal fishing activities. Exceptions include anchoring of vessels while conducting lawful fishing activity or, in GFNMS, mariculture activities conducted pursuant to a valid lease, permit, or license or other authorization issued by the State of California. This proposed regulation would not create an adverse impact on commercial fishing operations, since lawful fishing activities are exempt from the prohibition. Although the lawful use of fishing gear is exempt from the proposed regulation, fishing in the study area is otherwise regulated by NMFS or CDFW.

Installing moorings is prohibited by the regulations of GFNMS and CBNMS, because of the potential for submerged lands disturbance. In addition, the potential for improper disposal of human waste or discharges of fuel, oil, and toxic materials from vessels using the moorings is also of concern. Derelict or abandoned moorings also pose a threat to navigation. Any existing or future moorings installed by fishing vessels within the State waters of the study area require a valid lease as per State law. Fishing vessel owners in need of a mooring are required to apply for a mooring lease from California State Lands Commission (CSLC), for which the sanctuary would then authorize the mooring under proposed sanctuary regulations. The proposed change to mooring installations would have minor beneficial impacts on fish species populations and their respective commercial and recreational fisheries from an increase in habitat enhancement and ecosystem function from a comprehensive mooring plan. These requirements may pose a minor burden on boat owners, but would not cause a substantive economic loss to the commercial fishing industry.

In summary, these regulations would provide added protection to the benthic habitats of the study area, would prevent a further loss and degradation of habitats, and improve the overall health of the ecosystem of the study area. The regulations would cause a minor beneficial impact on commercial fishing from habitat enhancement, and a minor burden for vessel owners needing a mooring lease.

Oil, Gas, and Mineral Regulations

Extending the sanctuary-prohibition on exploring for, developing or producing oil, gas, and minerals to the expansion area would secure the study area from the potential detrimental environmental impacts from this type of activity and ensure a healthy and thriving ecosystem that supports valuable commercial fisheries. Exploration of oil and gas operations present several methods for introducing toxins and oil into the marine environment, e.g., accidental spill, seepage during operations, etc. Oil and other toxins are detrimental to most marine species, including fish. Oily and toxic waste discharges can have direct significant adverse impacts (e.g., death or illness) on fish populations or they can have indirect impacts from long-term habitat degradation and reductions in prey availability. Also, offshore oil and gas facilities can preclude fishing from areas where such facilities (e.g., platforms, pipelines, offshore storage and treatment) are located. Thus, any proposed measures that create a stricter regulatory environment with regard to oil, gas, and minerals would have the potential to protect habitat and water quality, benefit fish populations by maintaining ecosystem conditions within the sanctuaries, and protect established fishing grounds.

Introduced Species Regulations

Controlling introduced species could have both beneficial and adverse effects on fisheries. The proposed regulations, which are the same as the existing sanctuary regulations, would prohibit the release of introduced species (except striped bass released during catch and release fishing activity). In GFNMS, there would be a second exception for existing mariculture, which currently takes place within the existing sanctuary boundaries. The prohibition of introduced species could benefit commercial fisheries in the expansion area by limiting the competition between introduced and native species, thus improving the ongoing stability of the native fish populations, improving stability in the numbers of native fish species available for catch, and helping to stabilize the potential for future revenues derived from commercial catch. In this regard, the proposed regulation would have a beneficial impact on commercial fisheries.

One of the pathways for the introduction of species is through commercial fishing operations, specifically, baiting. The proposed regulation would potentially require commercial fisheries to alter their baiting methods so as to reduce the likelihood for the release of introduced species into the sanctuaries. In theory, these alterations may increase the burden on the fisheries, but no known non-native species are currently being used as bait in the study area. Therefore, this requirement may have either no impact or minor adverse impacts on commercial fisheries.

Regarding mariculture, as noted in the affected environment discussion, future mariculture activities would be subject to NOAA oversight under NMSA and, in federal waters, MSA authority. In CBNMS, there would be no mechanism to allow mariculture that involved introduced species, which is consistent with existing sanctuary regulations. Because there are no existing or planned mariculture operations in the CBNMS expansion area, the proposed regulation would not negatively impact mariculture operations. Mariculture would be handled differently in GFNMS. In addition to the GFNMS introduced species exception for existing permitted mariculture, the proposed GFNMS regulations include a provision that would allow authorization of non-invasive introduced species shellfish mariculture in State waters, should this use be proposed in the future. Although, there are no existing or planned mariculture uses in the proposed GFNMS expansion area, there would be a mechanism to authorize such uses in State waters in the future. Impacts on commercial fishing would be negligible for such activities.

In summary, the proposed introduced species regulation could benefit native fish populations upon which the commercial fishing industry depends. However, minor adverse impacts on the fishing industry from limiting the choice of bait to only native species may occur. The proposed regulation is expected to have both beneficial and minor adverse impacts on commercial fisheries or mariculture operations.

Deserted Vessels

The proposed regulation for the GFNMS expansion area would prohibit vessels from being deserted, and prohibit leaving harmful matter (hazardous materials or wastes) aboard grounded or deserted vessels in the study area. Although CBNMS regulations do not include this specific provision, CBNMS (and GFNMS) regulations would prohibit abandoning any structure, material or other matter on or in the submerged lands in the study area, as described under the submerged land regulations (above). Extending these regulations may have some minor adverse impacts on the commercial fishing industry, as it would place an additional economic burden on vessel owners to ensure that a capsized or otherwise incapacitated vessel be salvaged and not abandoned and to ensure that any hazardous substances are removed from an abandoned vessel. However, the intent of this regulation is to ensure that vessel owners take responsibility for their vessels before additional damage can be done to marine resources. While this may be a burden for the vessel owner, the overall risk of an individual boat being abandoned is relatively small, and the impact on the commercial fishing industry as a whole is considered minor. Reducing the risks of hazards posed by abandoned vessels would have beneficial effects on fisheries and fishing operations and activities.

MPWC Zones

With the establishment of zones for MPWC use, the activity of fishing using MPWCs as a platform would be allowed to continue within those zones, provided the MWPCs complied with sanctuary regulations. MPWC use by all operators, including those pursuing commercial fishing operations would not be allowed outside the MPWC zones. MPWC operators that are exempt from this proposed provision are the National Park Service, U.S. Coast Guard, Fire or Police Departments or other Federal, State or local jurisdictions during emergency search and rescue missions or law enforcement operations.

While it is not possible, due to lack of data to estimate the number of commercial fishers who conduct their operations using MPWCs as their only platform, the number is likely limited, and therefore the impacts are considered less than significant.

Overall, the impact of the proposed action on the commercial fishing industry is expected to provide long term beneficial ecosystem and habitat impacts that healthy commercial fisheries depend on, while select regulations have the potential to cause short term adverse impacts on fishing vessel operations that are expected to be less than significant, as described above.

No Action Alternative

The No Action alternative would maintain the status quo. There would be no added benefits to commercial fish species due to no change in actions regarding water quality, benthic habitat or ecosystem function; and there would not be any adverse economic or operational impacts on owners or operators of fishing vessels in the study area.

Existing Regulations Alternative

Applying the existing regulations, particularly the prohibition on oil and gas exploration and altering of the submerged lands, with the exception of lawful fishing activities, is expected to protect the expansion area from potentially harmful environmental impacts as the result of these activities and ensure in the long term healthy habitats and a thriving ecosystem that support the harvest of valuable commercial species. The beneficial impacts would be similar to those impacts described for the proposed action with a few differences.

Under this alternative, there would be no exception for clean graywater discharges, so all vessels would be required to hold graywater while transiting the expansion area. Applying regulations as they relate to select prohibitions on vessel discharges to the expansion area have the potential to cause short term economic loss to individual commercial fishery operators with a less than significant impact on commercial fisheries. These adverse impacts would be similar to those impacts described for the proposed action, though all vessel operators would need to take measures to hold graywater in the expansion area, which, for vessels without sufficient holding capacity, could necessitate equipment upgrades or fees to discharge to a reception facility.

In addition, the use of MPWCs would be prohibited in the expansion area. The use of this type of vehicle as a platform from which to commercially fish would not be allowed. The impact of the MPCW regulation on the commercial fishing industry as a whole is expected to be limited.

Also, without the ability to authorize mooring leases from CSLC after the expansion became effective, any existing commercial fish moorings with such leases would need to be certified within 60 days of completion of the boundary expansion (using the existing certification mechanism of GFNMS). Any future moorings installed by fishing vessels within the State waters of the study area would require a valid lease as per State law and could be issued a sanctuary permit if a GFNMS mooring plan, similar to the plan developed for Tomales Bay were developed and adopted by CSLC, the California Coastal Commission and/or other federal, State, or local authorities of competent jurisdiction. Other differences in this alternative would not affect commercial fishing.

Overall, the impact of this alternative on the commercial fishing industry is expected to be similar as the proposed action, such that it provides long term beneficial ecosystem and habitat impacts that healthy commercial fisheries depend on, while select regulations have the potential to cause short term adverse impacts on fishing vessel operations that are expected to be less than significant.

Arena Cove Alternative

This alternative could be implemented either with the proposed action or the existing regulations alternative. For this alternative, the footprint of the expansion area is slightly increased, as the entire area of Arena Cove would be included in GFNMS. Any increases in beneficial effects on water quality, benthic habitat or ecosystem function from this increase in area protected are minor compared to both the proposed action and the existing regulations alternative. The adverse effects on the operational activities of individual commercial vessel owners may increase slightly, as the footprint of the sanctuary expansion area is larger. Under the proposed action, any fishing vessel owners or operators with a lease for a mooring would also need to acquire a Letter of Authorization from the sanctuary for the leased mooring. This requirement

may pose a minor administrative burden on commercial fishing boat owners, but would not cause a substantive economic loss to the commercial fishing industry. There would be no authorization ability in the GFNMS regulations under the existing regulations alternative.

Overall, the impact of this alternative on the commercial fishing industry is expected to be similar as the proposed action, such that it provides long term beneficial ecosystem and habitat impacts that healthy commercial fisheries depend on, while select regulations have the potential to cause short term adverse impacts on fishing vessel operations that are expected to be less than significant.

MPWC Zones Alternative

Applying the regulations as part of the MPWC zones alternative would yield the same long term beneficial impacts on habitats and ecosystems of harvested fish populations and the same short term adverse impacts on commercial fisheries as the proposed action. As noted, the activity of fishing using MPWCs as a platform would be allowed to continue within MPWC zones; the slight variations in the boundaries of the MPWC zones in this alternative would not change the conclusions of the impact analysis for the proposed action.

4.5 Cultural and Maritime Heritage Resources

A cultural resource is defined as any historical or cultural feature, including archaeological sites, historic structures, shipwrecks, and artifacts. Historical resources are defined as any resources possessing historical, cultural, archaeological or paleontological significance, including sites, contextual information, structures, districts, and objects significantly associated with or representative of earlier people, cultures, maritime heritage, and human activities and events. Historical resources include “submerged cultural resources,” and also include “historical properties,” as defined in the National Historic Preservation Act (NHPA), as amended, and its implementing regulations, as amended.

Submerged cultural resources are defined loosely as archaeological or culturally significant sites over fifty years old that are located underwater. These sites may include shipwrecks, downed airplanes, or submerged structures within the more recent historic period, or may include sites dating to the prehistoric period consisting of campsites with stone tools or stones used for grinding.

The study area for the proposed sanctuary expansion, including the adjacent coastline, comprises a diverse representation of cultural and maritime heritage resources, which are defined as tangible and intangible cultural resources that reflect humanity’s interactions with the marine environment, including maritime cultural landscapes and elements such as shipwrecks, lighthouses, life-saving stations, seacoast fortifications, shipyards, waterfront piers, wharves, docks, marine manufacturing facilities, sailor boarding houses — in short, all physical and cultural manifestations of the use of the water for trade, commerce, recreation, warfare, immigration, etc.

4.5.1 Regional Overview of Affected Environment

The maritime cultural landscape is the term used for the archaeological concept combining sea and land; it means that the starting point for the subject of maritime archaeology is maritime culture. The concept also embodies the study of how the maritime environment shapes culture and how the culture reflects and interacts with the marine environment (Westerdahl 1998). The maritime cultural landscape for the study area can be separated into three broad categories: precontact history, ethnohistory and history. Precontact history describes events prior to European exploration and influence in the Americas. Ethnohistory represents information gleaned from ethnographic sources (including oral histories and anthropological and sociological studies) and historical accounts of Native American groups. History is generally postcontact information gathered from written documents from the time of early European exploration until today. The study area is rich in cultural and archaeological resources and has a long and interesting maritime past.

It is generally believed that human occupation of the West Coast dates back to at least 13,000 years before present (BP). Several sites around California are thought to have been occupied between 40,000 to 200,000 years BP; however, the reliability of the dating techniques used and the validity of the artifacts found in those sites remain controversial (Moratto 1984). It is widely held that prehistoric shorelines extended far out onto the continental shelf, and it is probable that the remains of California’s earliest settlements were inundated following the last Ice Age. Archaeological evidence for occupation of California during the Holocene Epoch (13,000 years BP to present) is stronger. Miwok and Kashia (an alternate spelling is *Kashaya*) Pomo once lived and harvested the resources of an abundant marine landscape that was inundated

by sea level rise with the end of the last great Ice Age, reflecting prehistoric human persistence and adaptation to a changing climate.

The study area's rich pelagic and shore-side marine resources provided sustenance for the Coast Miwok and Kashia Pomo peoples who have lived there for thousands of years. The heritage of the first peoples is today represented not only in the sites of former settlements but also by the traditions and legacy of those people, who have persisted as important members of the coastal community. The Federated Indians of Graton Rancheria (both Southern Pomo and Coast Miwok people) maintain tribal lands at the Graton Rancheria; the Kashia Band of Pomo Indians maintains tribal lands at Stewarts Point Rancheria; and the Manchester Band of Pomo Indians maintains tribal lands at the Manchester-Point Arena Rancheria. Their place names, their memories and their traditions remain on these shores and waters.

Traditional knowledge and archaeological evidence indicates that the coastal peoples subsisted largely on the products of the marine environment — harvesting salt, kelp, marine mammals, shellfish and fish. The basis of accumulated wealth in addition to food resources was the processed shell of mollusks such as the Bodega Bay clam (*Saxidomus giganteus*) (Merriam 1910).

Following Spain's "discovery" of the Pacific Ocean in 1513, early Spanish explorers took to that ocean beginning in 1527. Among those voyages that followed were explorations by mariners such as Juan Rodríguez Cabrillo, Sebastian Rodríguez Cermeño, and Sebastian Vizcaíno in 1542-1543, 1595 and 1602 that studied and visited the California coast, while others crossed the Pacific to commence a transoceanic trade with the Philippines after 1565 (Mathes 1968). In the two centuries that followed, the "Manila galleons" and other Spanish ships made regular landfall on the northern California coast in or around Cape Mendocino before turning south to bear for Acapulco (Gearhart et al. 1990).

Maritime voyages of the late 1700s that explored the coast included that of Juan Perez (1775), which charted Bodega Bay, as well as exploration and charting by nations and empires wishing to challenge Spanish and later Mexican political and economic domination. These included voyages by British explorer George Vancouver (1792-1795) and French explorer Jean-François de Galaup (1786). At the same time, voyages by Americans began to reach California's shores, mostly in search of seal furs.

As the influx of foreign ships continued and as the region transitioned to American rule following the Mexican War (1846-1848) and prospered following the Gold Rush (1849-1855), ports, such as San Francisco and Monterey, and smaller coastal harbor towns from Bodega Bay to Point Arena were developed through fishing, lumber trade, coastal shipping, and economic exchange. Regional fishing communities dating back to the middle of the 19th century are distinctive for their rugged, individualistic culture born of a hard and sometime dangerous life harvesting fish at sea. It is an area strongly shaped and influenced by the offshore marine environment as well as inshore kelp forests and marine terraces which provided fisheries and habitat for marine mammals.

The rich pelagic resources of this maritime landscape, particularly the kelp forests in the numerous coves and inlets that provided habitat for the California sea otter (*Enhydra lutris nereis*), and this area's ocean-influenced climate's benefits for agriculture brought the Russian American Company to the coast in the early 19th century to hunt otters for their fur, and ultimately to establish settlements for agriculture and as a base for their sealing operations.

The maritime fur trade also changed the cultures of the native peoples. In California, the trade and the arrival of the Russians had a particular impact on the Kashia Pomo, whose major village, *Meteni*, became the site of the Ross Colony, or Fort Ross, a thriving Russian-American Company settlement from 1812 to 1841 and a successfully functioning multi-cultural settlement for some thirty years.

A separate settlement was made inland of “Port Rumiantsev,” or Bodega Bay, where two shoreside warehouses and a dock occupied the lands of the Coast Miwok. At Fort Ross, the Kashia lived, worked and intermarried among the Aleuts and Russians in a multicultural community (Ogden 1941).

The Aleutian kayak, referred to as *baidarkas*, was an Aleut watercraft that consisted of a skeleton covered with skillfully lofted and fitted sheath of split walrus, sea lion, or seal hide. California models were maintained, repaired and constructed at the Russian shipyard in the valley below Fort Ross. Russian and Aleut farmers and fur traders established agricultural outposts and a fortified settlement from which hunters on *baidarkas* hunted the marine mammals to near-extinction, working in the numerous small coves and kelp forests of this area before venturing farther south to the Farallones and into San Francisco Bay. Their place names, the standing and reconstructed buildings of Fort Ross (the first Russian Orthodox chapel south of Alaska, the stockade, and four other buildings called the Kuskov House, The Officials Barracks, and two corner blockhouses), and the archaeological remains of their other settlements and camps at Bodega Head and along the coast remain as a reminder of them and their activities (Delgado 2013). “Today many Kashaya still reside on the reservation [at Stewarts Point Rancheria] and in areas surrounding Fort Ross. Although the majority live and work in the principal cities of Sonoma County, many have gone on to continue their careers in the greater Bay Area. Presently a growing number of Kashaya occupy positions of political and educational leadership among the Indian and non-Indian communities of this region. Many of their numbers are to be found in the educational, academic, health care, social services, and administrative professions. Although the Kashaya are contemporary California Indians in a modern and fast moving world, they still retain their strong feelings of attachment to their ancestral land and the way of life that was so long enjoyed by their ancestors” (Fort Ross Conservancy 2003).

The coastal region and its maritime cultural landscape retain, in addition to their traditions and historical knowledge, indigenous place names noted by George Davidson of the U.S. Coast Survey and marked on manuscript survey charts (T sheets) in NOAA’s archives — names phonetically rendered like *Otono* Cove, *Meteni* Cove (and *Meteni*, a major village), *Chitono* Cove, *Tsukai* Cove, *Wallala*, and *Sulmawi* Cove.

Ocean-based commerce and industries are important to the maritime history, the modern economy, and the social character of this region. Here the cold sea merges with warm air from the coastal hills and valleys to pull in thick blankets of fog that created an ideal climate for the growth of the redwood forests. By 1870, the coast was lined with dozens of camps and settlements that shipped goods in small, two-masted schooners that easily navigated the rocky shoreline to load at the end of wire-rope “chutes” in ports known as “dogholes” because they were so small that a “dog had enough room to go in and back out.” The use of two-masted schooners also spurred the development of small shipyards along the coast, including one at Point Arena.

People adapted to the rugged maritime environment utilizing these small maneuverable schooners that hugged the coast to log the redwoods and carry the timber to markets as close as San Francisco and as distant as the U.S. Eastern Seaboard, Australia and Asia (McNairn and MacMullen 1945). The only high-

way to create that economy was the sea, with vessels working the coast before heading to Cordell Bank and thence turning south to commence their run into San Francisco Bay. That trade left not only place names and the archaeological remains of the dogholes and those vessels unlucky enough to be lost on these shores, but also lasting communities like Bodega Bay, Fort Ross, Timber Cove, Stewart's Point, Iversen's Landing in Sonoma County and Gualala and Point Arena in Mendocino to name a few (Sullenberger 1980). Submerged archaeological remnants relating to the many landings, wire, trapeze loading chutes and offshore moorings likely exists in the study area, and would add significant knowledge about the vessel loading operations for these unique doghole ports.

These interactions and overlapping activities have left physical as well as cultural traces ranging from place names, ocean highways no longer traveled, coastal settlements, industrial structures, and shipwrecks to form a maritime cultural landscape which is unique and nationally important. This coast is a perfect illustration of how the offshore ocean connects with the shore, and beyond, in terms of humanity's engagement with the marine environment.

This was a region which helped build not only California, but the nation's economy and communities, but which also became a place settled by people who came from around the world to establish on these shores themselves and their families. It is the location of prominent and long standing landmarks for international and national maritime traffic, connecting to offshore Cordell Bank and Point Reyes as a key intersection in shipping traffic from hundreds of years ago to today, with place names forgotten as well as still known place names left by Spanish, Russian, British and American mariners.

The dangers of the rugged shoreline inspired the mapping of the coast as well as the construction of the Point Arena lighthouse, the placement of buoys and other markers, and the placement of a life-saving station at Point Arena to assist those in peril on the sea. Despite charts and experience, some ships that navigated this ocean highway came to grief as a result of storms, fog, and mistakes in navigation that led to shipwrecks.

The largest concentrations of shipwrecks in the study area are off Point Arena. Spanish explorer Ferrelo named it Punta de Cabos in 1543, but by the 17th century Spanish sailors crossing the Pacific and sighting it called it the Barra de Arena (Sand Point) or Punta Delgada. George Vancouver misspelled it Barro de Arena in 1792 and that name persisted on American charts through 1851. The U.S. Coast Survey finally set the name as Point Arena in 1853.

Records indicate that over 200 vessel and aircraft losses were documented between 1820 and 1961 along California's north-central coast from Bodega Head north to Point Arena's contiguous waters (see Table 4.5-1). Some of the sites have been located and inventoried by the National Park Service and California State Parks, as well as recreational SCUBA divers (ONMS 2013). Shipwrecks include vessels lost while sailing to and from the north coast doghole ports. These shipwrecks as well as other cultural ties including family and business relationships, demonstrate the interconnected nature of maritime activity that strongly linked communities such as Point Arena, or Gualala, with the city and port of San Francisco.

The earliest known shipwreck in the study area is a Russian brig lost off Point Arena. On June 4th, 1820 the company brig *Il'mena* weighed anchor at Sitka, Alaska and set sail for the Ross settlement. The ship carried 25 passengers and a cargo of supplies consisting largely of materials for outfitting the brig *Buldakov*,

then lying on the launching ways at the Ross shipyard. The voyage was uneventful until June 18th when landfall was made off the northern California coast. Just before midnight of that day, the *Il'mena* became trapped behind the cape and projecting reef of present day Point Arena and after several desperate but failed tacking maneuvers, the ship grounded in the surf zone just north of the cape. Passengers and crew were quickly transferred to shore where they spent the remainder of the night in the shelter of the small sand dunes that parallel the shoreline (Allan 2013).

One submerged historic property, *SS Pomona*, was listed on the National Register of Historic Places in 2008; the shipwreck is located in Fort Ross Cove, Sonoma County, partly in a California State Park. The steamship *Pomona* was built in 1888 by the Union Iron Works in San Francisco for the Oregon Improvement Company. The passenger-cargo steamer was a single-propeller, steel-hulled vessel that traveled between San Francisco and Vancouver, British Columbia making stops at ports in between. On March 17, 1908, the *SS Pomona* was transiting northward on a routine voyage encountering heavy seas when it struck a reef off Fort Ross. Captain Swansen, *Pomona's* master, tried to save the vessel by running it aground in Fort Ross cove, but impacted a wash rock inside the cove and sank. Over the subsequent months, salvage efforts were conducted on the ship, and eventually she was dynamited as a navigational hazard. Today, the wreckage of *SS Pomona* lies in less than 50 feet of water in Fort Ross Cove (ONMS 2013).

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Arena Cove, north side of harbor	Schooner	<i>Sara Alexander</i>	1889	115922
Bodega Head, 5 miles northwest of	U.S. Military Aircraft	Avenger TBM-3	1944	22945
Bodega Bay, 7 miles north of	Steam Schooner	<i>Newburg</i>	1918	130779
Bodega Bay, off	Motor Fishing Vessel	<i>Eight Bros</i>	1937	220563
Bodega Head	Schooner	<i>Joseph</i>	1880	75800
Bodega Head, 12 miles off	U.S. Military Aircraft	Helldiver SB2C-4	1944	20261
Bodega Head, 150 yards offshore	Steam Schooner	<i>Albion River</i>	1903	107737
Bodega Head, 6.5 miles north	Barge	<i>Caroga</i>	1953	259176
Bodega Head, off	Schooner-Tern Rig	<i>Volunteer</i>	1906	161573
Bodega, near	Brig	<i>Marshall</i>	1859	
Bowens Landing	Brig	<i>Wolcott</i>	1863	
Bowens Landing	Schooner	<i>Flying Mist</i>	1867	9589
Bowens Landing	Schooner	<i>Free Trade*</i>	1871	9848
Bowens Landing	Schooner	<i>Artful Dodger</i>	1877	1170
Bowens Landing	Schooner	<i>Mary Hart</i>	1878	17412
Bowens Landing	Schooner	<i>California*</i>	1880	5155
Bowens Landing	Schooner	<i>Nidaros</i>	1882	18541
Bowens Landing	Schooner	<i>California</i>	1888	5757
Bowens Landing	Schooner	<i>Ellen Adelia</i>	1890	7984
Bowens Landing	Schooner	<i>Bill the Butcher*</i>	1893	2755
Bowens Landing	Schooner	<i>Caroline Medan</i>	1883	5725
Bowens Landing, about 4 1/2 miles off	Schooner	<i>Emily Stephens</i>	1882	135388
Bowens Landing, small cove	Schooner	<i>A. J. Monje</i>	1869	
Caspars Reef or Saunders Reef	Steam Schooner	<i>Caspar</i>	1897	126518
Del Mar Landing	Steam Schooner	<i>Santa Barbara*</i>	1905	117003

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Del Mar Landing, 1/4 mile southeast	Steam Schooner	Klamath	1921	206801
Duncan's Landing	Schooner	<i>Emma Adelia</i>	1872	7984
Duncan's Landing	Schooner	<i>Sovereign</i>	1873	23175
Duncan's Mill	Schooner	<i>Glenarm</i>	1875	10733
Fish Rock	Schooner	<i>North American</i>	1859	
Fish Rock	Schooner	<i>Cochief</i>	1863	
Fish Rock	Schooner	<i>Sarah Louise</i>	1875	23173
Fish Rock	Schooner	<i>David and Ettie*</i>	1878	6893
Fish Rock	Schooner	<i>Osceola</i>	1880	19145
Fish Rock	Schooner	<i>Mary Zephyr</i>	1882	17418
Fish Rock	Schooner	<i>Stranger*</i>	1882	2032
Fish Rock	Scow Schooner	<i>H. Bendel</i>	1888	95295
Fish Rock	Schooner Yacht	<i>Ariel</i>	1888	105374
Fish Rock	Schooner	<i>Cochief</i>	1889	
Fish Rock	Schooner	<i>Charlotte</i>	1889	5144
Fish Rock	Schooner	<i>Ester Cobos*</i>	1889	135342
Fish Rock	Schooner	<i>John McCullough</i>	1893	75521
Fish Rock	Schooner	<i>Rio Rey*</i>	1900	110864
Fish Rock	Schooner	<i>Rio Rey</i>	1901	110864
Fish Rock	Steam Schooner	<i>Crescent City</i>	1903	126014
Fish Rock	Steam Schooner	<i>Brooklyn*</i>	1916	31705
Fish Rock	Tramp Steamer	Orteric	1922	141907
Fish Rock Reef	Steam Screw	<i>Arispe</i>	1854	
Fish Rock Reef	Brig	<i>Donna Maria</i>	1854	
Fisks Mill	Schooner	<i>Carolita</i>	1876	5539
Fisks Mill	Schooner	<i>Gracie B. Richardson</i>	1888	85889
Fisks Mill	Schooner	<i>Archie and Fontie</i>	1902	106742
Fort Ross	Schooner	<i>Sacramento</i>	1844	
Fort Ross	Ship	Joseph S. Spinney	1892	75678
Fort Ross	Steam Screw	Whitelaw	1893	80942
Fort Ross	Schooner	<i>J. Eppinger</i>	1901	76710
Fort Ross	Pass Cargo Steamer	Pomona	1908	150444
Fort Ross	Schooner	<i>Osceola*</i>	1875	19145
Fort Ross Landing	Fishing Vessel	<i>Riga</i>	1932	230590
Fort Ross, 1 1/2 miles from	Schooner	<i>Arab*</i>	1882	1517
Fort Ross, 3 miles south	Pass/Cargo Steamer	<i>Monterey</i>	1880	90211
Gualala	Schooner	<i>Three Sisters</i>	1880	24795
Gualala Point, southwest of	Freighter	Dorothy Wintermote	1938	216365
Gualala River	Schooner	<i>Skylark</i>	1876	23183
Horseshoe Point	Freighter	Norlina	1926	212840
Iversen's Landing	Scow Schooner	<i>S. Danielson</i>	1903	115945
Iversen's, Rough and Ready	Schooner	<i>Ida Florence*</i>	1883	12447
Iversens Landing	Schooner	<i>Rosalie</i>	1883	

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Iversens Landing	Schooner	<i>Arthur</i>	1890	105384
Iversens Landing	Schooner	<i>Betty Danielson</i>	1902	
Iversens Landing	Schooner	<i>Davidson</i>	1903	
Iversens Landing, Rough and Ready	Schooner	<i>Olivia Schultz</i>	1883	19488
Iversens Landing, Rough and Ready	Schooner	<i>Anne</i>	1877	1193
Iversens Landing, Rough and Ready	Schooner	<i>Solano</i>	1877	234482
Iversens Landing, Rough and Ready	Schooner	<i>Ida Florence</i>	1890	12447
Jenner Point, 2 miles west	U.S. Military Aircraft	<i>Hellcat</i>	1945	43056
Manchester Beach	Fishing Vessel	<i>Santa Rosalia</i>	1950	
Point Arena	Pilot Boat	<i>Fannie</i>	1852	
Point Arena	Schooner	<i>Charles and Edward</i>	1858	
Point Arena	Sloop-Sealer	<i>Jack Hays</i>	1858	
Point Arena	Schooner	<i>Don Leandro</i>	1861	
Point Arena	Schooner	<i>Rosalie</i>	1862	
Point Arena	Ship	<i>E. Bulkley</i>	1864	
Point Arena	Schooner	<i>Helen</i>	1865	
Point Arena	Schooner	<i>Amazone or Amazon</i>	1869	
Point Arena	Schooner	<i>B. F. Lee*</i>	1870	1870
Point Arena	Schooner	<i>Emilie Schroeder*</i>	1871	8637
Point Arena	Schooner	<i>Elsie Iverson</i>	1872	
Point Arena	Schooner	<i>Annie M. Iverson</i>	1873	105146
Point Arena	Schooner	<i>Annie</i>	1874	
Point Arena	Schooner	<i>Sine Johnson*</i>	1874	23136
Point Arena	Brig	<i>Curlew*</i>	1875	5133
Point Arena	Schooner	<i>Barbara Fritchie*</i>	1880	
Point Arena	Schooner	<i>Zulu</i>	1880	
Point Arena	Schooner	<i>Robert and Minnie*</i>	1880	110289
Point Arena	Schooner	<i>Alviso</i>	1883	
Point Arena	Schooner	<i>Reliance</i>	1885	110965
Point Arena	Schooner	<i>Elsie Iverson</i>	1886	135840
Point Arena	Schooner	<i>Fannie A. Hyde</i>	1886	9948
Point Arena	Schooner	<i>Albert Walker*</i>	1888	106532
Point Arena	Steam Schooner	<i>Prentiss*</i>	1905	150938
Point Arena	Steam Schooner	<i>Shna-Yak*</i>	1908	204509
Point Arena	Steam Schooner	<i>G. C. Lindauer*</i>	1912	39775
Point Arena	Steam Schooner	<i>Fort Bragg*</i>	1912	207985
Point Arena	Auxiliary Schooner	<i>Dunkerque</i>	1918	
Point Arena	Tug	<i>Nata</i>	1918	
Point Arena	Gasoline Schooner	<i>Mae Hyman*</i>	1921	220460
Point Arena		<i>H. F. Harper</i>	1922	
Point Arena		<i>Escola</i>	1926	
Point Arena	Steam Schooner	<i>Svea*</i>	1928	203192
Point Arena		<i>Vanguard</i>	1930	

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Point Arena	Tanker	<i>Lebec*</i>	1937	221358
Point Arena	Freighter	<i>Pacific Enterprise</i>	1949	149949
Point Arena	Schooner	<i>C. W. Gunnel</i>	1862	
Point Arena	Schooner	<i>Venus*</i>	1875	25893
Point Arena	Schooner	<i>Barbara Hernster*</i>	1901	3372
Point Arena Cove	Schooner	<i>Ajax</i>	1869	1190
Point Arena Cove	Schooner	<i>General Ord</i>	1889	85053
Point Arena Cove	Scow Schr Barge	<i>Horace Templeton</i>	1920	95249
Point Arena Cove	Gas Screw–Freight	<i>Cuautemoc</i>	1924	223010
Point Arena Cove, just south of	Steam Schooner	<i>Noyo</i>	1935	211426
Point Arena Cove, south side reef	Steam Schooner	<i>West Coast</i>	1891	81085
Point Arena Harbor	Schooner	<i>S. F. Blunt</i>	1868	
Point Arena Light, 1.5 miles north of	Fishing Vessel	<i>Georgene M.</i>	1953	250179
Point Arena Light, 4 miles, 035 deg true	Fishing Vessel	<i>Star of the Sea</i>	1961	230081
Point Arena Lighthouse, 1/4 mile northwest	Pass Cargo Steamer	<i>Winnebago</i>	1909	81871
Point Arena Lighthouse, north side	Schooner	<i>James Townsend</i>	1895	13832
Point Arena Lighthouse, off	Pass Cargo Steamer	<i>Phoenix*</i>	1910	150929
Point Arena Reef	Bark	<i>Hyack</i>	1863	
Point Arena, 15 miles off	U.S. Military Aircraft	Helldiver	1944	18740
Point Arena, 15 miles south	U.S. Military Aircraft	Hellcat	1944	42172
Point Arena, 20 miles off	Purse Seiner	<i>Nordic Pride</i>	1941	241040
Point Arena, 25 miles southeast of	Steam Schooner	<i>Noyo</i>	1918	130395
Point Arena, near	Steamship	<i>Charles Nelson*</i>	1910	127253
Point Arena, near	Steamer	<i>Celilo*</i>	1919	211948
Point Arena, north of	Brig	IL'MENA	1820	
Point Arena, North–Manchester Beach	Steamer	<i>San Benito</i>	1896	116342
Point Arena, north side of lighthouse	Pass Cargo Steamer	<i>Eastport</i>	1875	8884
Point Arena, off	Steam Schooner	<i>Daisy Putnam*</i>	1919	211722
Point Arena, south of lighthouse	Steam Schooner	<i>Jeanie*</i>	1900	76889
Point Arena, south reef	Passenger Steamer	<i>Sea Foam</i>	1931	201861
Point Arena, south side	Steam Schooner	<i>Point Arena*</i>	1904	150402
Point Arena, south side of harbor	Schooner	<i>Golden Gate*</i>	1889	85314
Point Arena, Wash Rock	Schooner	<i>Eliza Miller*</i>	1880	
Point Arena, Wash Rock	Steam Schooner	<i>Del Norte*</i>	1917	157295
Russian Gulch	Auxiliary Schooner	<i>Stockton City</i>	1922	81613
Russian Gulch, Sonoma	Schooner	<i>Hannah Louise</i>	1872	11673
Russian Gulch, Sonoma	Steam Schooner	<i>Maggie Ross</i>	1892	92037
Russian Landing	Schooner	<i>D. C. Haskins</i>	1885	6643
Russian River	Schooner	<i>Eagle</i>	1863	
Russian River	Schooner	<i>Far West*</i>	1863	
Russian River	Schooner	<i>Maggie Young</i>	1889	91200
Russian River	Schooner	<i>C. T. Hill*</i>	1889	126539
Russian River, 280 DGR, 15 miles off	U.S. Military Aircraft	Avenger	1945	45839

Table 4.5-1. Known Shipwrecks and Lost Aircraft within Study Area

Location	Type	Name	Year Lost	Official No.
Russian River, 2 miles below mouth	Schooner	<i>Ann Sophia</i>	1870	1183
Salmon Creek	Schooner	<i>Albert and Edward</i>	1877	105592
Salt Point	Schooner	<i>Mary Zephyr*</i>	1866	
Salt Point	Schooner	<i>Mary D. Pomeroy</i>	1879	91162 or 02
Salt Point	Schooner	<i>Phantom</i>	1881	150163
Salt Point, 4 miles northwest	Brig	<i>Ellen H. Wood</i>	1859	
Salt Point, Gerstle Cove	Schooner	<i>Nautilus</i>	1877	18595
Salt Point, near	Schooner	<i>Bianca</i>	1861	
Salt Point, near		<i>Erial</i>	1889	
Saunder's Reef	Schooner	<i>Jaqua</i>	1888	
Saunder's Reef, foundered off Fish Rock	Steam Schooner	Arctic	1922	107640
Saunders Reef	Steam Screw	<i>Ferndale*</i>	1883	120434
Saunders Reef	Steamer	<i>Jaqua*</i>	1913	100715
Saunders Reef	Oil Tanker	Whittier	1922	81862
Signal Port (Hard Scratch & Steen's)	Schooner	<i>R. B. Handy</i>	1883	110290
Stewarts Point	Schooner	<i>Christina Steffens*</i>	1888	125500
Stewarts Point	Schooner	<i>Portia</i>	1894	150443
Stewarts Point	Steamer	Albion	1913	106967
Stewarts Point	Freighter	<i>Kenkoku Maru*</i>	1951	52855
Stewarts Point	Schooner	<i>Pet</i>	1866	
Stewarts Point	Schooner	<i>Huichica*</i>	1871	11680
Stewarts Point	Schooner	<i>Minerva</i>	1871	
Stewarts Point	Schooner	<i>Pinol</i>	1873	20090
Stewarts Point	Schooner	<i>Matilda Heron</i>	1875	17407
Stewarts Point	Schooner	<i>D. W. Tietjen</i>	1878	6532
Stewarts Point	Schooner	<i>Charles T. Winslow</i>	1885	5156
Stewarts Point	Schooner	<i>Mary Etta</i>	1905	92284
Stewarts Point	Schooner	<i>Fannie A. Hyde*</i>	1871	9948
Stewarts Point	Schooner	<i>Kate Piper</i>	1871	14202
Stewarts Point	Schooner	<i>Lizzie Derby*</i>	1871	1871
Stewarts Point	Schooner	<i>George Henrich</i>	1871	85027
Stewarts Point, Fisherman's Bay	Schooner	<i>Susie</i>	1876	115098
Stewarts Point, Fisherman's Bay	Steamer	<i>Wild Pigeon</i>	1870	26787
Stewarts Point, Fishermans Bay	Schooner	<i>Abraham Lincoln</i>	1881	1180
Stewarts Point, 6 miles southwest	Schooner	<i>J. Mora Moss</i>	1874	13559
Stewarts Point	Schooner	<i>Jennie Reed</i>	1861	
Timber Cove	Schooner	<i>Liberty</i>	1872	15207
Timber Cove	Schooner	<i>Golden Rule</i>	1882	10731
Timber Cove	Steamer-Screw	<i>Acme</i>	1889	106607
Timber Cove	Schooner	<i>Ester Cobos</i>	1891	135342
Timber Cove (Windermere Point)	Bark	Windermere	1883	78765
Timber Cove, Fish Creek	Schooner	<i>Christina Steffens*</i>	1880	125500

Source: ONMS 2013.

*Indicates vessel refloated, salvaged or not a total loss. Vessel names in bold have been located.

4.5.2 Regulatory Overview

Cultural and historical resources are regulated through numerous federal and State laws, as summarized below. Depending on the resources identified, the following authorities could apply within the study area.

Federal Regulations

National Historic Preservation Act of 1966, 16 U.S.C. §§ 470-470x-6

Cultural and historical resources on state and federal lands are protected primarily through the National Historic Preservation Act (NHPA) (16 U.S.C. § 470 et seq.) of 1966 and its implementing regulations (found at 36 CFR Part 800). Section 106 of the NHPA requires federal agencies to identify and evaluate the effects of their actions on properties listed in or eligible for listing in the National Register of Historic Places (NRHP). Consultation with the State Historic Preservation Officer (SHPO), Native American tribes Tribal Preservation Officer (THPO), the Advisory Council for Historic Preservation, and other interested parties is part of the regulatory process. The intent of the process is to require the federal agency, in consultation with other affected parties, to make an informed decision as to the effect its actions would have on something that may be important to our heritage. To be protected under the NHPA, a property must meet specific criteria of significance established under the NHPA's regulations at 36 CFR Part 60.

According to NHPA (§ 36 CFR PART 800), the agency official shall apply the National Register criteria (36 CFR part 63) to properties identified within the area of potential effects that have not been previously evaluated for National Register eligibility, in consultation with the SHPO/THPO and any Indian tribe that attaches religious and cultural significance to identified properties and guided by the Secretary's Standards and Guidelines for Evaluation. The passage of time, changing perceptions of significance, or incomplete prior evaluations may require the agency official to reevaluate properties previously determined eligible or ineligible. The agency official shall acknowledge that Indian tribes possess special expertise in assessing the eligibility of historic properties that may possess religious and cultural significance to them.

Regarding assessment of adverse effects, NHPA (§ 800.5) states that the agency official shall apply criteria of adverse effects to historic properties within the area of potential effects, in consultation with the state preservation officer/tribal historic preservation officer and any Indian tribe that attaches religious and cultural significance to identified historic properties. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.

Archaeological Resources Protection Act of 1979, 16 U.S.C. §§ 470aa–470mm

This act requires all archaeological excavations on federal lands to be undertaken pursuant to a permit issued by the federal land manager. This act also imposes criminal penalties for unauthorized excavations.

Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. §§ 3001-3013

This act requires federal agencies to identify and inventory possible Native American, native Alaskan, or native Hawaiian human remains, burial goods, or cultural items in their collections and to make them available for repatriation to affiliated tribes or lineal descendants. The act also establishes procedures for handling and disposing of such remains, burial goods, or cultural items discovered on federal lands.

Executive Order 13175: Tribal Consultation and Collaboration

Under Executive Order 13175 of November 6, 2000, federal departments and agencies are charged with engaging in regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and are responsible for strengthening the government-to-government relationship between the United States and Indian tribes. Representatives from the Manchester Band of Pomo Indians, Kashia Band of Pomo Indians of Stewarts Point Rancheria, and Federated Indians of Graton Rancheria were invited in writing to consult with NOAA under Executive Order 13175. As of publication date of this document, NOAA has not received responses to the consultation letters. However, NOAA will continue to seek their participation in the development of this rulemaking.

Abandoned Shipwreck Act of 1987, 43 U.S.C. §§ 2101-2106

This act asserts federal ownership over certain shipwrecks found in State waters (within the 3-nm line) and transfers ownership of those resources to the states. Included in the range of resources covered by this act are certain abandoned shipwrecks, which have been deserted and to which the owner has relinquished ownership rights with no retention. Shipwrecks in federal waters remain under the jurisdiction of the federal government.

Sunken Military Craft Act of 2005, 10 U.S.C. §§ 13

This act asserts federal ownership over sunken military craft. No person shall engage in or attempt to engage in any activity directed at a sunken military craft that disturbs, removes, or injures any sunken military craft, except — (1) as authorized by a permit under this title; (2) as authorized by regulations issued under this title; or (3) as otherwise authorized by law.

Antiquities Act of 1906, 16 U.S.C. §§ 431-433

This act requires a permit to excavate or remove any historic objects or antiquities from federal lands, and grants the President the authority to designate as national monuments landmarks of historic or scientific importance. The permit provisions of the Antiquities Act are generally enforced through the NHPA process.

Historic Sites, Buildings, Objects, and Antiquities Act of 1935, 16 U.S.C. §§ 461-467

This act establishes the national policy of preserving historic resources and gives the Secretary of the Interior the power to make historic surveys and document, evaluate, acquire, and preserve archaeological and historic sites across the country. This act provided the authority behind the establishment of the National Historic Landmarks and Historic American Buildings Survey programs.

State Regulations***Administration and Control of State Lands, California Public Resources Code §§ 6301-6614***

The referenced section of the California Public Resources Code provides authority for the California State Lands Commission (CSLC or commission) to administer and control State lands. Excerpts from the California Code of Regulations that relate to the CSLC's regulation of submerged archaeological and historical resources are below.

California Code of Regulations, Title 2 Administration

The California State Lands Commission prohibits disturbance of submerged archaeological and historical resources, except by permit in the study area from the mean high tide line to 3 nm offshore. Under Title 2, the commission has exclusive jurisdiction over all ungranted tidelands and submerged lands owned by the State, and of the beds of navigable rivers, streams, lakes, bays, estuaries, inlets, and straits, including tidelands and submerged lands or any interest therein, whether within or beyond the boundaries of the State as established by law, which have been or may be acquired by the State (a) by quitclaim, cession, grant, contract, or otherwise from the United States or any agency thereof, or (b) by any other means. All jurisdiction and authority remaining in the State as to tidelands and submerged lands as to which grants have been or may be made is vested in the commission. The commission shall exclusively administer and control all such lands, and may lease or otherwise dispose of such lands, as provided by law, upon such terms and for such consideration, if any, as are determined by it. Relevant excerpts of the regulation include the following:

§§ 6309. (a) The commission shall administer the Shipwreck and Historic Maritime Resources Program, which consists of the activities of the commission pursuant to this section and Sections §§6313 and §§6314.

(b) The commission has exclusive jurisdiction with respect to salvage operations over and upon all tide and submerged lands of the state. The commission may grant the privilege of conducting salvage operations upon or over those lands by the issuance of permits. The commission may adopt rules and regulations in connection with applications for those permits, and the operations to be conducted in the salvage operation, that the commission determines to be necessary to protect those lands and the uses and purposes reserved to the people of the state.

(c) The commission may issue permits for salvage on granted tide and submerged lands only after consultation with the grantee and a determination by the commission that the proposed salvage operation is not inconsistent with the purposes of the grant.

Department of Parks and Recreation, California Public Resources Code §§ 5001-5019.5

The California Public Resources Code provides for California Department of Parks and Recreation's (California State Parks') control of the State park system, including management of submerged archaeological and historical resources within State park units.

The department may manage state marine reserves, state marine parks, state marine conservation areas, state marine cultural preservation areas, and state marine recreational management areas. Department authority over units within the State park system shall extend to units of the State Marine Managed Areas (MMAs) system that are managed by the department.

The California State Parks regulations are found in the California Code of Regulations, Title 14, Natural Resources, §§ 4300-4971. Several of the regulations pertain to historic or cultural resources.

California Code of Regulations, Title 14 Division 3

The Department of Parks and Recreation has broad authority under Title 14 to protect geological and archaeological features within designated State parks.

§ 4307. Geological Features.

(a) No person shall destroy, disturb, mutilate, or remove earth, sand, gravel, oil, minerals, rocks, paleontological features, or features of caves. (b) Rockhounding may be permitted as defined in Section 4301(v).

Note: Authority cited: Section 5003, Public Resources Code. Reference: Section 5008, Public Resources Code. This regulation is relevant because it addresses paleontological features.

§ 4308. Archaeological Features.

No person shall remove, injure, disfigure, deface, or destroy any object of archaeological or historical interest or value.

Note: Authority cited: Section 5003, Public Resources Code. Reference: Section 5008, Public Resources Code.

§ 4309. Special Permits.

The Department may grant a permit to remove, treat, disturb, or destroy plants or animals or geological, historical, archaeological or paleontological materials; and any person who has been properly granted such a permit shall to that extent not be liable for prosecution for violation of the foregoing.

Note: Authority cited: Section 5003, Public Resources Code. Reference: Sections 5001.65 and 5008, Public Resources Code.

Fish and Wildlife Protection and Conservation, California Fish and Game Code §§ 1600-1616

California Code of Regulations, Title 14 Division 1

The Fish and Game Commission has broad authority under Title 14 of the CCR to establish regulations that restrict unlawful injury, damage, taking, or possessing any geological, or cultural marine resource. Of particular relevance to this DEIS are the eleven existing Marine Protected Areas (MPAs) in the study area (Title 14, Section 632 – Marine Protected Areas, Marine Managed Areas and Special Closures). MPAs in the study area have been in effect since May 1, 2010, and some include submerged historic shipwrecks or other cultural or historic artifacts. They may also include cultural resources from Indian tribes. Regarding protection of cultural resources, Section 632 states, in part:

(A) State Marine Reserves: In a state marine reserve, it is unlawful to injure, damage, take, or possess any geological, or cultural marine resource, except under a scientific collecting permit issued pursuant to Section 650 or specific authorization from the commission for research, restoration, or monitoring purposes.

(B) State Marine Parks: In a state marine park, it is unlawful to injure, damage, take, or possess any living or nonliving marine resource for commercial purposes. Any human use that would compromise protection of geological, cultural features, may be restricted by the commission as specified in subsection 632(b), areas and special regulations for use. The commission may issue scientific collecting permits pursuant to Section 650 or specifically authorize research, monitoring, and educational activities consistent with protecting resource values.

(C) State Marine Conservation Areas: In a state marine conservation area, it is unlawful to injure, damage, take, or possess any geological, or cultural marine resource for commercial or recreational purposes, or a combination of commercial and recreational purposes except as specified in subsection 632(b), areas and special regulations for use. The commission may issue scientific collecting permits pursuant to Section 650 or specifically authorize research, education, and recreational activities, provided that these uses do not compromise protection of the species of interest, natural community, habitat, or geological features.

See Section 4.3 (Biological Resources) for additional information on MPAs.

4.5.3 Impact Assessment Methodology

Cultural resources must meet certain federal criteria to be considered a significant historic resource. The following significance criteria are the basis for determining inclusion of a property on the NRHP (36 CFR 60.4). The property must have or be the following:

- Association with events that have made a significant contribution to the broad patterns of our history;
- Association with the lives of persons significant to our past;
- Resources that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master or that possess high artistic values or that represent a significant and distinguishable entity whose component may lack individual distinction; or
- Resources that have yielded, or may be likely to yield, information important in prehistory or history.

Pursuant to the NHPA and its implementing regulations, an undertaking has an effect on a historic property when it alters those characteristics of the property that qualify it for inclusion in the NRHP. An undertaking is considered to have an adverse effect on a historic property when it diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects include, but are not limited to, the following:

- Physical destruction, damage, or alteration of all or part of the property;
- Isolation of the property or alteration of the character of the property's setting when that character contributes to the property's qualifications for the NRHP;
- Introduction of visual, audible, or atmospheric elements that are out of character with the property or changes that alter its setting;
- Neglect of a property resulting in its deterioration or destruction; and
- Transfer, lease, or sale of a property without adequate provision to protect the property's historic integrity.

The proposed action would have a significant adverse effect on a historic property if its implementation would alter those characteristics of the property that qualify it for inclusion on the NRHP, per 36 CFR PART 800 (see the reference to this part of the CFR where NHPA is described in Section 4.5.2, Regula-

tory Overview). In addition, an action that may alter any characteristic of a historic property or resource determined by a Native American tribe to be of traditional religious and cultural significance to the tribe would be considered to have a significant effect on that resource. Effects may include changes to a historic property or its setting or to a resource or its setting.

4.5.4 Environmental Consequences

It is important to note that sunken vessels may contain hazardous cargo, abandoned fuel, and unexploded ordnance. These sunken vessels are slowly deteriorating in a corrosive marine environment. For instance, shipwrecks of concern that should be assessed are the British motor-ship *Pacific Enterprise* a 436-foot steel hull freighter lost off Point Arena in 1949, and the steamer *Dorothy Wintermote*, a 252-foot steel hull freighter lost off Gualala Point in 1938.

Proposed Action

The proposed action would have a beneficial effect on historical resources because it would prohibit drilling, dredging, or altering, constructing, placing, or abandoning any structure material or matter on or in the submerged lands within the proposed expansion area. Any of these activities could potentially disturb, injure, or damage submerged historical resources. Currently GFNMS has regulations in place to protect submerged historical resources. The proposed action includes adding a regulation for CBNMS to protect historical resources, which would prohibit the possession, moving, removing, injuring, or attempting to possess, move, remove or injure a sanctuary historical resource. Although both sanctuaries will have a new regulation to authorize some otherwise prohibited activities such as seabed alteration, the sanctuary superintendent has authority to impose conditions on the activity to protect sanctuary resources and must agree to such authorization. With these provisions in place, any potential adverse impacts on historical resources would be negligible.

The National Marine Sanctuaries Act (NMSA) mandates the management and protection of submerged archaeological sites within sanctuary boundaries. Therefore, the ONMS has conducted research to identify submerged heritage resources in the study area and completed an inventory and implemented a Section 106 Review under the NHPA (as described in Section 4.5.2). NOAA preservation mandates for maritime archaeological resources derive directly from elements of the Federal Archaeology Program, including the NHPA. Section 110 of the NHPA states that each federal agency shall establish a preservation program for the protection of historic properties. The laws described in Section 4.5.2 codify the protection of heritage sites from illegal salvage and looting. NOAA jurisdictional authority would be applicable to the study area causing no adverse effect on archaeological properties.

No Action Alternative

The No Action alternative would be to continue to manage the submerged bottom lands by the California State Lands Commission, California Department of Parks and Recreation, and California Department of Fish and Wildlife (within their jurisdictions) with no concurrent jurisdiction under the National Marine Sanctuaries Act. The California State Lands Commission (CSLC) has jurisdiction over the State's tide and submerged lands within 3 nm of the mean high tide line along the coastline and offshore islands.

Depending on the resources identified, other laws could also apply; see Section 4.5.2 (Regulatory Overview). However, activities currently allowed, such as drilling or otherwise altering the seabed, could disturb submerged cultural resources. The above-referenced State protections would not apply in federal waters. While there are federal laws regarding shipwrecks and other cultural resources, the additional beneficial effects afforded by national marine sanctuary status, as described for the proposed action, would not occur under the No Action alternative.

Existing Regulations Alternative

Applying the current regulations to the proposed expansion area would result in beneficial impacts on historical resources, from the prohibition of drilling, dredging, or altering, constructing, placing, or abandoning any structure material or matter on or in the submerged lands. This beneficial impact would be the same as described for the proposed action. Although there would be a specific regulation in GFNMS regarding the prohibition of disturbance of historical resources, no such regulation would be in place for CBNMS (because it is not part of the existing regulations) under this alternative, so the protections offered would not be as comprehensive as described for the proposed action. As noted in Section 4.5.2, there are several existing laws that provide some degree of protection of historical resources, but State regulations only extend 3 nm offshore. However, this alternative would not include the authorization process for either CBNMS or GFNMS, so there would be no provision to allow activities that may alter or disturb the seabed. Without this provision, there would be little chance of uses or activities occurring that would disturb historical resources. The overall effect would be beneficial, compared to existing conditions.

Arena Cove Boundary Alternative

This alternative would have a beneficial effect on cultural resources because this would prohibit drilling, dredging, or altering, constructing, placing, or abandoning any structure material or matter on or in the submerged lands within the larger sanctuary area that includes all of Arena Cove. Any of these activities could potentially disturb, injure, or damage submerged and cultural resources. Historic shipwrecks have been reported in Arena Cove and submerged historic remains associated with the pier structure and spilled cargos may exist. Southeast of the pier and close to shore is a steam boiler associated with the wrecking event of the steamer *Sea Foam* lost in 1931. The boiler is still visible above the waterline during a low tide.

MPWC Zones Alternative

The slight changes in the designated MPWC use zones would not change the impact conclusions of either the proposed action or existing regulations alternative. There would be no difference in potential impacts on historical resources from this alternative.

4.6 Socioeconomic Resources, Human Uses and Environmental Justice

This section includes analysis of the following resource issue areas: social and economic activities and uses: recreation and tourism (including public access), land use and development, research and education, and passive economic use. The study area or potential affected environment varies, by issue area and is defined for each subsection in Section 4.6.1 (Regional Overview of Affected Environment).

Please note that impacts on commercial fishing, offshore energy, marine transportation and homeland security and military uses are addressed in Sections 4.4, 4.7, 4.9 and 4.10, respectively. Also note that a separate benefits-costs analysis is provided in Chapter 11 (Comparison of Alternatives). That analysis is, in part, based on information in this section.

4.6.1 Regional Overview of Affected Environment

Socioeconomics

For the socioeconomic issue area, the study area is comprised of seven counties where the majority of social and economic activities associated with resource uses in the boundary expansion area take place. The counties include Alameda, Contra Costa, Marin, Mendocino, San Francisco, San Mateo, and Sonoma (Figure 4.6-1). Data for the state of California and, in some cases, the U.S. are presented for comparison and analysis of possible broader effects of proposed actions. Data for Mendocino and Sonoma Counties, the two coastal counties adjacent to the boundary expansion, are also presented. Socioeconomic issues include population growth, employment, income and environmental justice.

This section also addresses business uses of the boundary expansion areas. Tourist/recreational businesses (e.g., lodging, restaurants) and uses (e.g. whale watching, kayaking, SCUBA diving, bird or other wildlife watching, recreational fishing) are prominent along Highway 1.

Socioeconomic Profile Definition

The socioeconomic profile provides the basis of analyses to establish local communities/economies dependence on study area resources. A standard profile includes information on population, demographics (e.g. sex, race/ethnicity, and age), population density, poverty rate, labor force, unemployment rate, income by place of work/industry, employment by industry, income by place of residence, and per capita income. The combined information describes the region's socioeconomic health.

Population and Key Measurements on the Economic Status of the Study Area

When assessing the condition of sanctuary resources, population is a key driver behind the pressures placed on sanctuary resources, but many in the population are also beneficiaries of the ecosystem services generated from sanctuary resources. For some key measures of economic status of the study area, per capita income, poverty rates, and unemployment rates are provided as key indicators in this section. The study area is compared to the U.S., California (CA) and Mendocino and Sonoma Counties for status and trends in selected measures (Table 4.6-1).

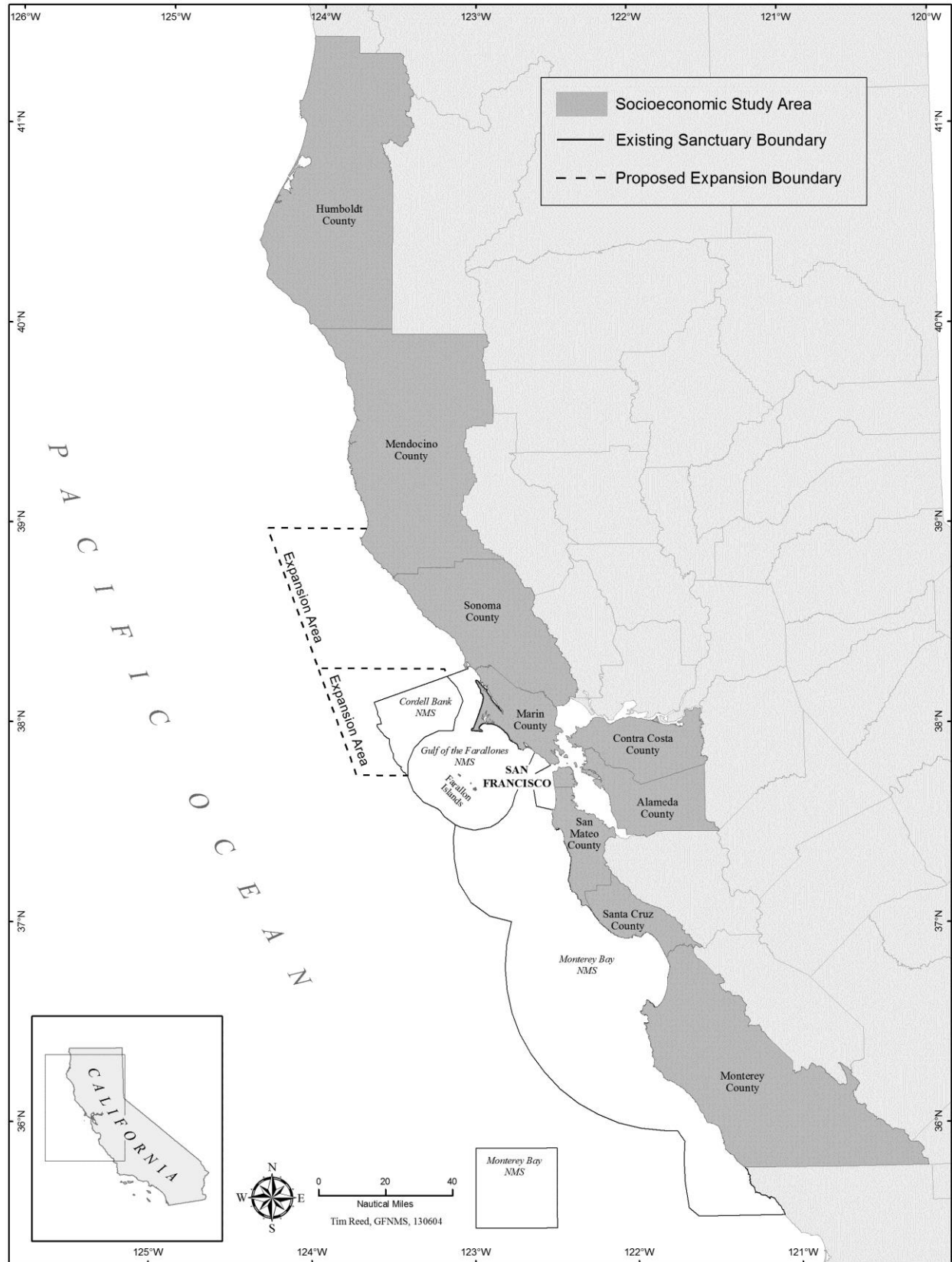


Figure 4.6-1. Counties Included in the Study Area

Table 4.6-1. Selected Socioeconomic Measures for Description of the Study Area

County	2010 Population	Population Change (%) 2000-2010	2010 Population Density ¹	2010 Per Capita Income (\$)	2010 Persons Below Poverty (%)	2010 Unemployment Rate (%)
Alameda	1,510,271	4.61	2,044	47,603	10.95	11.3
Contra Costa	1,049,025	10.56	1,465	54,817	8.69	11.1
Marin	252,409	2.07	485	82,498	6.65	8.0
Mendocino	87,841	1.83	25	34,733	16.75	11.3
San Francisco	805,235	3.67	17,169	69,351	11.50	9.6
San Mateo	718,451	1.60	1,602	66,629	6.78	8.8
Sonoma, CA	483,878	5.51	307	43,274	9.92	10.5
Mendocino & Sonoma Study Area Total	571,719	4.93	112	42,023	10.97	10.6
California	37,253,956	9.99	239	41,893	13.21	12.4
U.S.	308,745,538	9.71	87	39,791	13.25	9.6

1. Number of people per square mile.

Sources: U.S. Department of Commerce, Bureau of the Census and the Bureau of Economic Analysis, Regional Economic Information System

Population. The study area population covers seven California counties with a population of over 4.9 million in 2010, which is approximately 13% of California's total population. The three most populous counties in the study area include Alameda with 1.51 million, Contra Costa with 1.05 million, and San Francisco with 805,000 (Table 4.6-1).

Population Growth. For each 10-year period from 1970 to 2010, the study area's population grew at a slower rate than the state of California. Compared to the U.S., the study area grew at a slower rate in all 10-year periods, except 1980 to 1990. Mendocino and Sonoma Counties grew at a rate faster than the U.S., California and the study area for all 10-year periods except 2000 to 2010. (Table 4.6-2).

Projected Population Growth. The study area's population is projected to grow at higher rates than the 2000 to 2010 period for the period from 2010 to 2020. The study area's population is projected to grow at a slower rate from 2020 to 2040 relative to the 2000 to 2010 period. Mendocino and Sonoma Counties' rates of population growth are projected to exceed that of the study area for the period from 2010 to 2040 (Woods and Poole 2011) (Table 4.6-2).

Population Density. Population density is an indicator of the extent of pressures that the study area's population might have on sanctuary resources. Population density varies widely across the study area counties ranging from a high of 17,169 people per square mile in San Francisco County to a low of 25 people per square mile in Mendocino County (Table 4.6-1).

Table 4.6-2. Population Growth and Projected Growth

Measurement/Time Period	US	California	Study Area	Mendocino & Sonoma
Population Growth (%)				
1970 to 1980	11.59	18.59	7.47	42.99
1980 to 1990	9.81	25.74	14.88	28.01
1990 to 2000	13.09	13.82	12.36	16.29
2000 to 2010	9.53	9.99	5.1	4.93
Population Projections (%)¹				
2010 to 2020	--	--	5.21	8.44
2020 to 2030	--	--	5.02	7.97
2030 to 2040	--	--	4.64	7.32

1. Woods and Poole would not authorize NOAA to report US and California projections.

Sources: U.S. Department of Commerce, Bureau of the Census and Woods and Poole.

Per Capita Income. Per capita income is an indicator of the health or economic status of a community. In 2010, per capita income in the study area was \$56,735 and ranged from a low of \$34,733 in Mendocino County to a high of \$82,498 in Marin County. In 2010, per capita income in the study area exceeded that of the U.S., California and Mendocino and Sonoma Counties (Table 4.6-1) despite declines in real per capita income leading up to 2010. Real per capita income grew faster in the study area relative to the U.S., California and Mendocino and Sonoma Counties for the period 1990-2000, but declined in both periods from 2000 to 2010, while increasing in the U.S. Real per capita income in Mendocino and Sonoma Counties grew at a rate faster than the U.S and California, but slower than the study area for the period 1990 to 2000. For the period 2000 to 2010 Mendocino and Sonoma Counties declined at a rate faster than the U.S and California, but slower than the study area in 2000 to 2005 (Table 4.6-3 and Figure 4.6-2).

Unemployment Rates. Another indicator of the economic health of the study area is the unemployment rate. In 2010, the unemployment rate was 10.3% in the study area and ranged from a low of 8.0% in Marin County to a high of 11.3% in Mendocino and Alameda Counties. In 2010, the study area's unemployment rate was higher than the U.S., but lower than that for California and Mendocino and Sonoma Counties (Table 4.6-1). Unemployment rates were lower in the study area than in the U.S., the state and Mendocino and Sonoma Counties for the periods 1990 to 2000. Unemployment rates were lower in the study area than in the U.S. and state, but higher than Mendocino and Sonoma Counties in 2005. In 2010, the study area's unemployment rate was higher than the U.S., but lower than in California and Mendocino and Sonoma Counties (Table 4.6-3).

Table 4.6-3. Unemployment Rates and Per Capita Personal Income

Measurement/Year	US	California	Study Area	Mendocino & Sonoma
Unemployment Rate (%)				
1990	5.6	5.8	3.7	4.5
2000	4.0	4.9	3.4	3.7
2005	5.1	5.4	4.8	4.6
2010	9.6	12.4	10.3	10.6
Per Capita Income				
1990	\$19,354	\$21,380	\$26,308	\$21,257
2000	\$30,319	\$33,404	\$48,192	\$35,967
2005	\$35,452	\$38,731	\$53,116	\$39,995
2010	\$39,791	\$41,893	\$56,735	\$42,023
Per Capita Income (2013\$)				
1990	\$34,100	\$37,669	\$46,351	\$37,453
2000	\$40,545	\$44,671	\$64,446	\$48,098
2005	\$41,802	\$45,668	\$62,629	\$47,159
2010	\$42,022	\$44,241	\$59,915	\$44,379

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System and U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Index

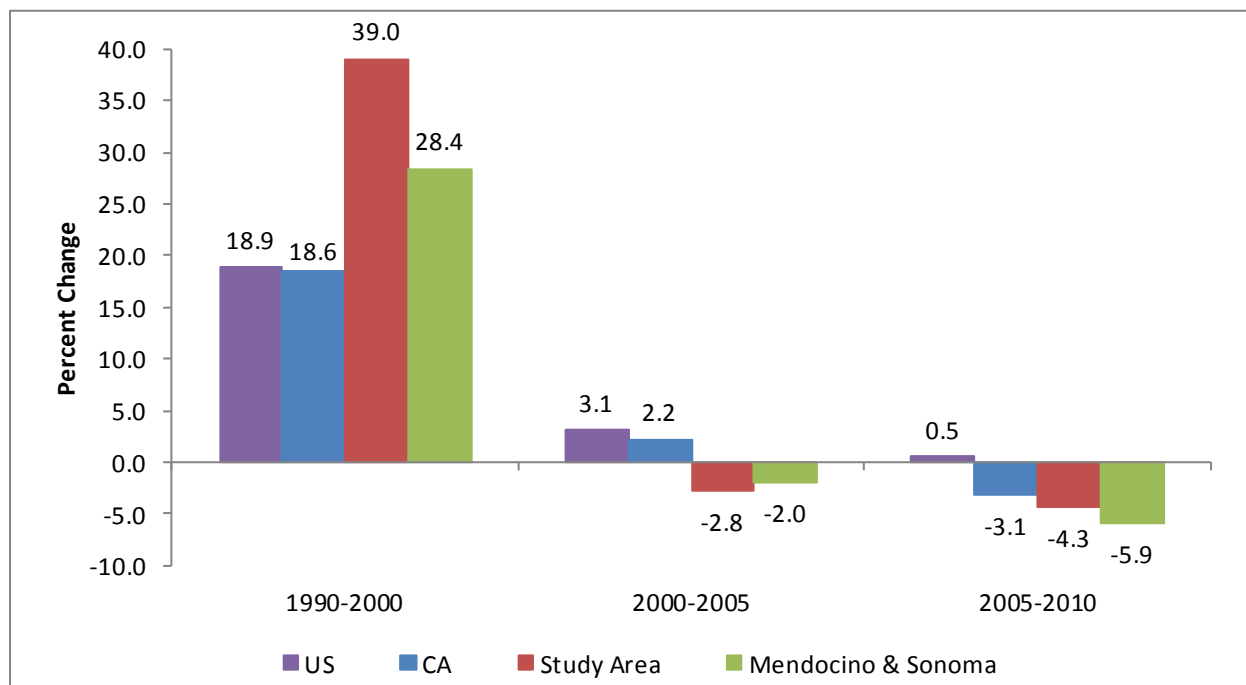


Figure 4.6-2. Changes in Real Per Capita Income in the Study Area versus the U.S., California and Mendocino and Sonoma Counties

Demographic Profiles

For demographic profiles, gender, race/ethnicity and age were chosen as the most important population characteristics to help understand the makeup of the study area. Race and Ethnicity are treated separately in the Census of the U.S. Racial categories include “White,” “Black or African American,” “Asian,” “Alaskan Native or Native American,” “Native Hawaiian or Other Pacific Islander” and “Multiple Races.” We reduced the categories reported here by combining “Alaskan Native or Native American,” “Native Hawaiian or Other Pacific Islander” and “Multiple Races” into the “Other” category for race. Hispanic represents ethnicity and in the Census is recorded separately from race with any race being eligible for being Hispanic. In the Census, Hispanic is “Hispanic, Latino or of Spanish Origin.”

Gender. Gender distribution was relatively constant in the study area and Mendocino and Sonoma Counties from 1990 to 2010. The proportion of males in the study area and Mendocino and Sonoma Counties was higher than the U.S. from 1990 to 2010, but lower than that of California (Figure 4.6-3).

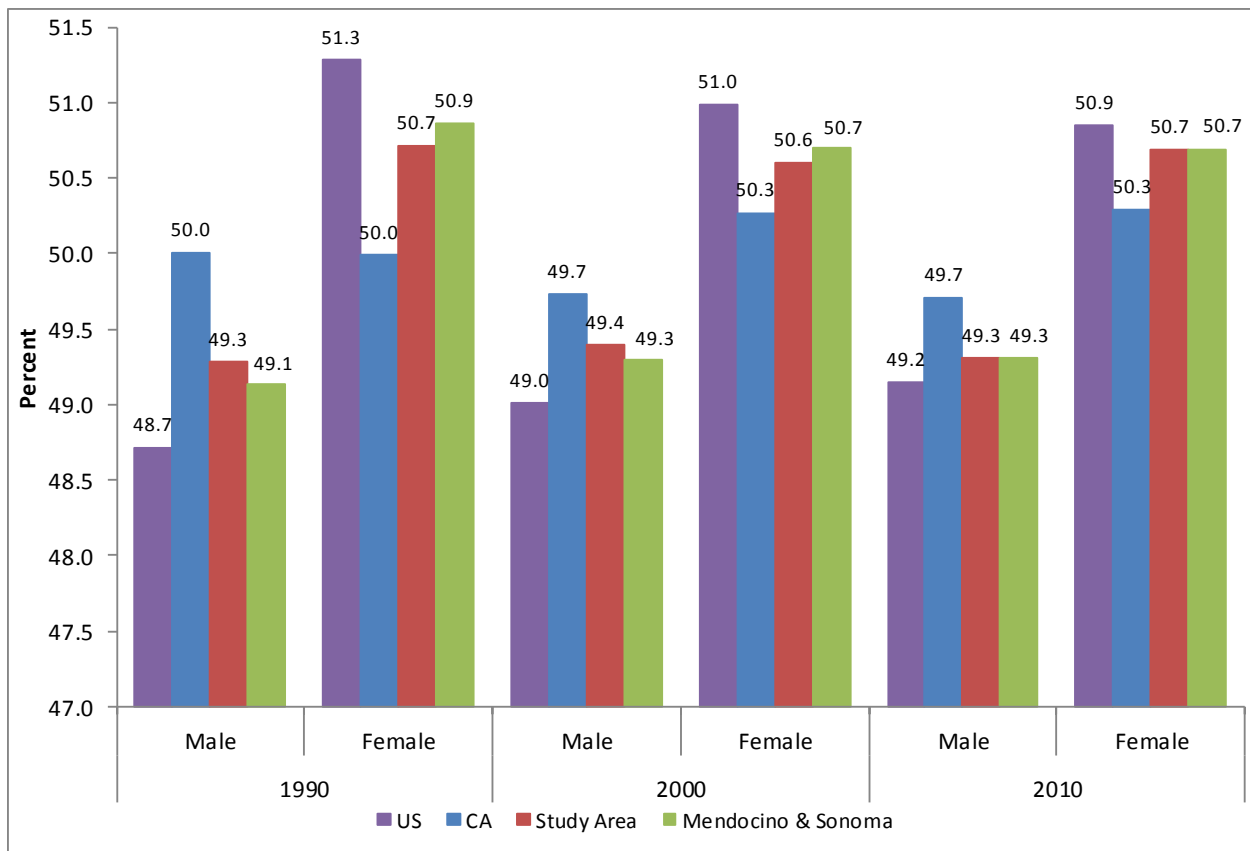


Figure 4.6-3. Gender Distributions in the Study Area versus the U.S., California, and Mendocino and Sonoma Counties, 1990, 2000 and 2010

Race/Ethnicity. Figure 4.6-4 illustrates current (year 2010) ethnicity percentages within the study area, compared to the U.S., state and Mendocino and Sonoma Counties. The changes in ethnicity over the past 20 years are shown in Figure 4.6-5.

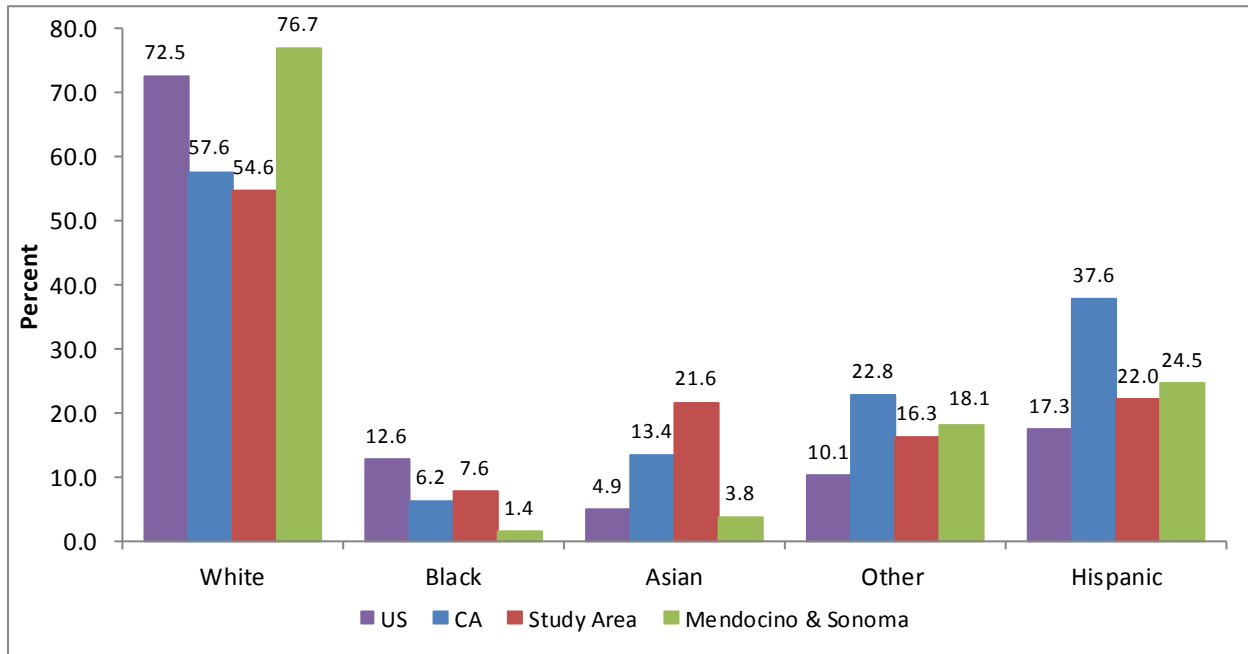


Figure 4.6-4. Race/Ethnicity in the Study Area versus the U.S., California and Mendocino and Sonoma Counties, 2010

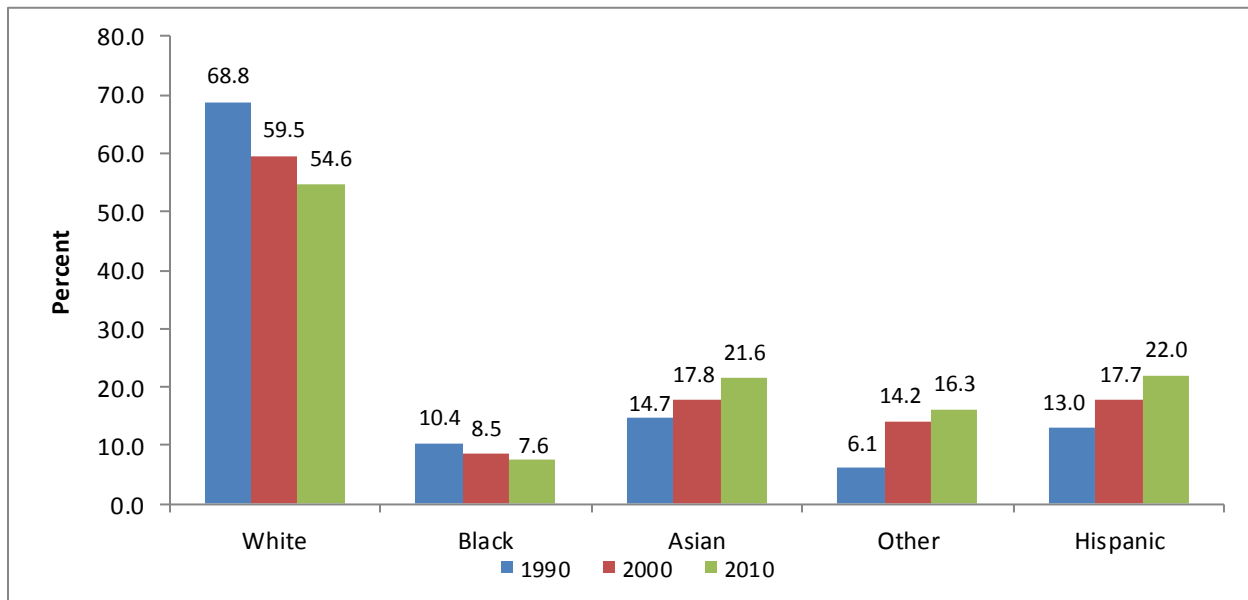


Figure 4.6-5. Race/Ethnicity in the Study Area, 1990, 2000 and 2010

Several indicators are used to identify the extent of minority communities and the economic status of the counties in the study area. In Table 4.6-1, poverty rates, unemployment rates and per capita income were presented by county as economic indicators of the economic status of the study area. In Figure 4.6-5, the distribution of race/ethnicity was presented for the entire study area. Table 4.6-4 provides the distribution by county.

Table 4.6-4. Race/Ethnicity by County in CB-GF Expansion Area, 2011

County	White	Black or African American	American Indian and Alaskan Native	Asian	Native Hawaiian and Other Pacific Islander	Two or More Races	Hispanic
Alameda	52.8	13.0	1.2	27.0	1.0	5.1	22.8
Contra Costa	68.8	9.7	1.0	15.2	0.6	4.8	24.8
Marin	86.2	3.0	1.2	5.8	0.3	3.5	15.7
Mendocino	87.1	1.0	6.1	1.9	0.2	3.7	22.9
San Francisco	54.5	6.3	0.9	33.9	0.5	4.0	15.4
San Mateo	64.4	3.2	0.9	25.8	1.6	4.1	25.6
Sonoma	87.9	1.9	2.2	4.1	0.4	3.6	25.4

Source: U.S. Department of Commerce, Bureau of the Census, Quick Facts.

The categories of race/ethnicity are more detailed in Table 4.6-4 than summarized in Figure 4.6-5 to focus more on minority populations. American Indian and Alaskan Natives and Native Hawaiian and Other Pacific Islanders are two categories representing small minority populations, but vary widely by county. Mendocino County has the highest proportion of population classified as American Indian and Alaskan Native. San Mateo and Alameda Counties have the highest proportion of their populations classified as Native Hawaiian and Other Pacific Islander. Black or African American, Asian and Hispanic populations, often considered minority populations, vary widely across the counties in the study area.

Age. In 2010, the age distribution of the population of the study area was not significantly different from either the U.S. or California (Figure 4.6-6). The proportion of the population ages 20 to 44 declined in the study area from 1990 to 2010, while it increased for those ages 45 to 64 (Figure 4.6-7).

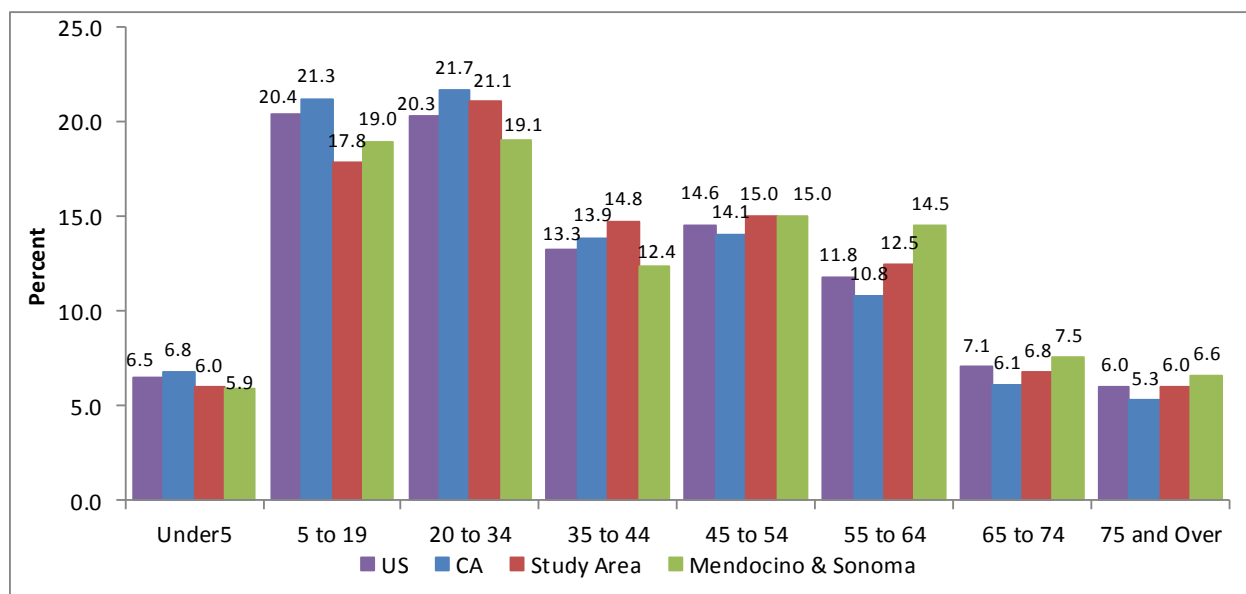


Figure 4.6-6. Age Distributions in the Study Area versus the U.S., California and Mendocino and Sonoma Counties, 2010

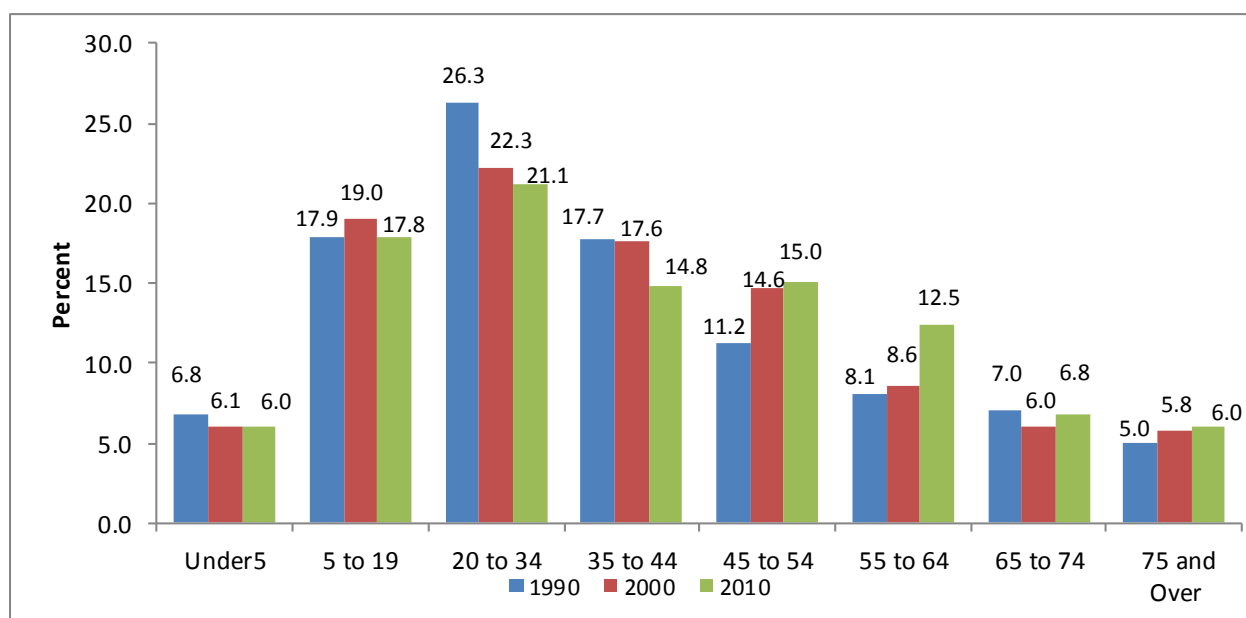


Figure 4.6-7. Age Distribution in the Study Area, 1990, 2000 and 2010

Economic Profile (Income and Employment)

In addition to evaluating the key indicators of the health of the economy using per capita income, poverty rates and unemployment rates, it is important to assess total personal income both generated within the study area (income by place of work) and what is received by residents in the study area (income by place of residence). The U.S. Department of Commerce, Bureau of Economic Analysis maintains the national income accounts on both these bases. People that live in a given area often receive income not derived by work in the area where they live. People receive pensions and social security payments. The unemployed receive unemployment compensation. Income-by-Place-of-Work as a percent of Income-by-Place-of-

Residence is usually a good indicator of an area having a significant retirement community. Sources of income not tied to the status of work in the local economy can provide more resilience to an economy making it less subject to the ups and downs of local work. The labor force and total employment and their growth rates are good indicators of a healthy or stagnant economy and opportunities for employment.

This section also includes information on proprietors' income and employment and the proportion of the study area's income and employment accounted for by proprietors of businesses. This is usually a good indicator of small businesses which are often connected to resource use in the sanctuaries (e.g. commercial fishing operations and recreation and tourist related businesses).

Finally, this section includes a summary of personal income and employment by industry sector. This is important for economic impact analyses of resource management/policy decisions.

Labor Force. In 2010, there were more than 2.55 million people in the labor force of the study area or about 14% of the entire labor force of California (Table 4.6-5). The study area labor force grew faster than that of California, but slower than that of Mendocino and Sonoma Counties over the 1990-2000 period. In the 2000-2010 period, California's and Mendocino and Sonoma Counties' labor forces continued to grow while the study area's labor force contracted (Figure 4.6-8).

Table 4.6-5. Labor Force and Labor Force Growth

Year	California	Study Area	Mendocino & Sonoma
1990	15,168,531	2,270,078	245,109
2000	16,857,578	2,579,576	296,836
2010	18,316,411	2,550,922	299,637
Labor Force Growth (%)			
1990-2000	11.1	13.6	21.1
2000-2010	8.7	-1.1	0.9

Source: U.S. Department of Labor, Bureau of Labor Statistics

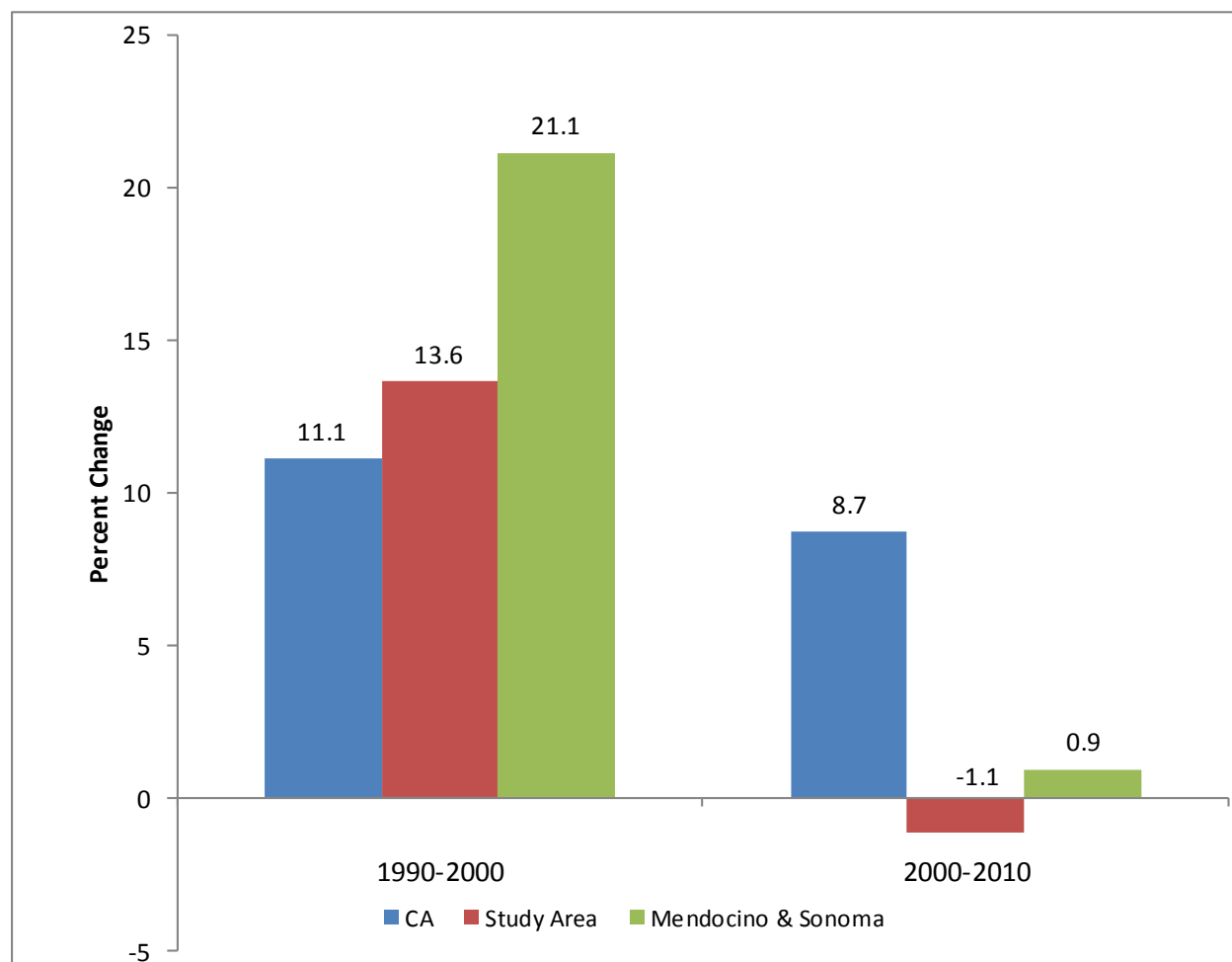


Figure 4.6-8. Labor Force Growth 1990-2000 and 2000-2010 in California versus the Study Area and Mendocino and Sonoma Counties

Personal Income. The U.S. Department of Commerce, Bureau of Economic Analysis (BEA) maintains two concepts of personal income in their Regional Economic Information System. Income is reported by “place or work” and by “place of residence.” Income by “place of work” is where the income generated by work in the geographic area of study, and is reported by economic sector (e.g. farm, manufacturing, retail, wholesale, etc.). Income by “place of residence” is reported by where the income is received. It is the total amount of income received by those who live in the study area. It includes income from investments, pensions, social security payments and other transfer payments. In addition, it includes income earned in areas from work outside the study area. This would include the income earned in a county where one works which is outside the study area. The amount of income earned by people who live outside the study area is subtracted as they take their incomes home to areas outside the study area. This information comes from the “Census of Inter-county Commuters” and BEA uses it to form what is called the “residence adjustment” which can be either positive or negative depending on whether people living in the study area and working outside the study area are earning more or less than people living outside the study area and working inside the study area. Economists often refer to this as the “Bedroom Community Effect.” In using the IMPLAN input-output model to estimate the economic impacts of activity in the study area and important first step is defining the study area of impact. Since IMPLAN assumes that all those who work

in the study area live in the study area and thus spend most of their income there, defining the study area such that the “bedroom community effect” is small makes estimates more accurate. Income by “place-of-work” as a percent of “total income by place-of-residence” serves as an indicator of two key aspects of a study area’s economy: whether it is an economy with a significant “bedroom community” and/or there is a large retirement community. When the percent of income by place of work is low relative to income by place of residence (below 100%, Table 4.6-6), economists then look to the “resident adjustment” and the amount of transfer payments in pensions and social security payments to further describe the nature of the local economy.

In 2010, study area income by place of work as a percent of income by place of residence was 74.1% and ranged from a low of 47.5% in Marin County and a high of 111.5% in San Francisco County. All counties in the Study Area have incomes by place of work lower than income by place of residence, except for San Francisco County (Table 4.6-6). Income by place of work as a percent of income by place of residence was higher in the study area and California than Mendocino and Sonoma Counties over the 2000 to 2010 time period and declined in both the study area and California over this period (Table 4.6-7 and Figure 4.6-9).

Table 4.6-6. Personal Income by Place of Residence and Place of Work, 2010

County	Income by Place of Residence (\$000)	Income by Place of Work (\$000)	Work as Percent of Residence
Alameda	\$72,024,822	\$55,762,084	77.4
Contra Costa	\$57,700,398	\$29,351,680	50.9
Marin, CA	\$20,854,466	\$9,895,696	47.5
Mendocino	\$3,049,993	\$1,644,157	53.9
San Francisco	\$55,850,894	\$62,256,151	111.5
San Mateo	\$47,946,507	\$35,037,442	73.1
Sonoma	\$20,975,353	\$12,387,049	59.1
Mendocino & Sonoma	\$24,025,346	\$14,031,206	58.4
Study Area Total	\$278,402,433	\$206,334,259	74.1

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System

Table 4.6-7. Personal Income by Place of Residence and Place of Work

Year/Area	Income by Place of Residence (\$Millions)	Income by Place of Work (\$Millions)	Work as Percent of Residence
2000			
Mendocino & Sonoma	\$19,597	\$12,170	62.1
Study Area	\$224,990	\$175,866	78.2
California	\$1,135,342	\$895,920	78.9
2005			
Mendocino & Sonoma	\$22,183	\$14,349	64.7
Study Area	\$250,033	\$194,278	77.7
California	\$1,387,661	\$1,093,320	78.8
2010			
Mendocino & Sonoma	\$24,025	\$14,031	58.4
Study Area	\$278,402	\$206,334	74.1
California	\$1,564,209	\$1,156,546	73.9

Source: U.S. Department of Commerce, Bureau of Economic Analysis,
Regional Economic Information System

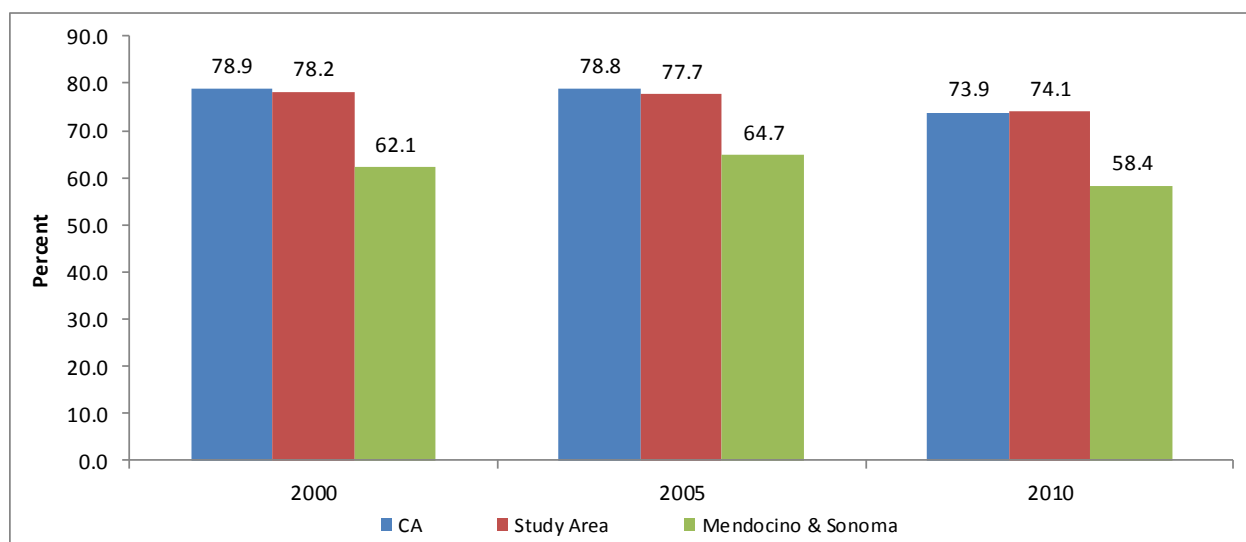


Figure 4.6-9. Income by Place of Work as a Percent of Income by Place of Residence in the Study Area versus California and Mendocino and Sonoma Counties, 2000, 2005 and 2010

Employment. In 2010, over 2.99 million people were employed in the study area or about 15% of all employment in California (Table 4.6-8). Total employment in the study area grew faster than in the state but slower than in Mendocino and Sonoma Counties during the 1990-2000 period. In the 2000-2010 period, total employment continued to grow in the state while it declined in the study area and Mendocino and Sonoma Counties (Figure 4.6-10).

Table 4.6-8. Total Employment, 1990-2000 and 2010

County	1990	2000	2010
Alameda	754,274	893,811	854,126
Contra Costa	397,329	473,865	470,495
Marin, CA	148,302	177,080	177,066
Mendocino	42,314	49,369	46,884
San Francisco	702,360	759,212	719,646
San Mateo	397,001	500,077	460,901
Sonoma	204,435	271,800	261,631
Mendocino & Sonoma	246,749	321,169	308,515
Study Area Total	2,646,015	3,125,214	2,990,749
California	16,834,516	19,466,162	19,732,278

Source: U.S. Department of Commerce, Bureau of Economic Analysis
Regional Economic Information System

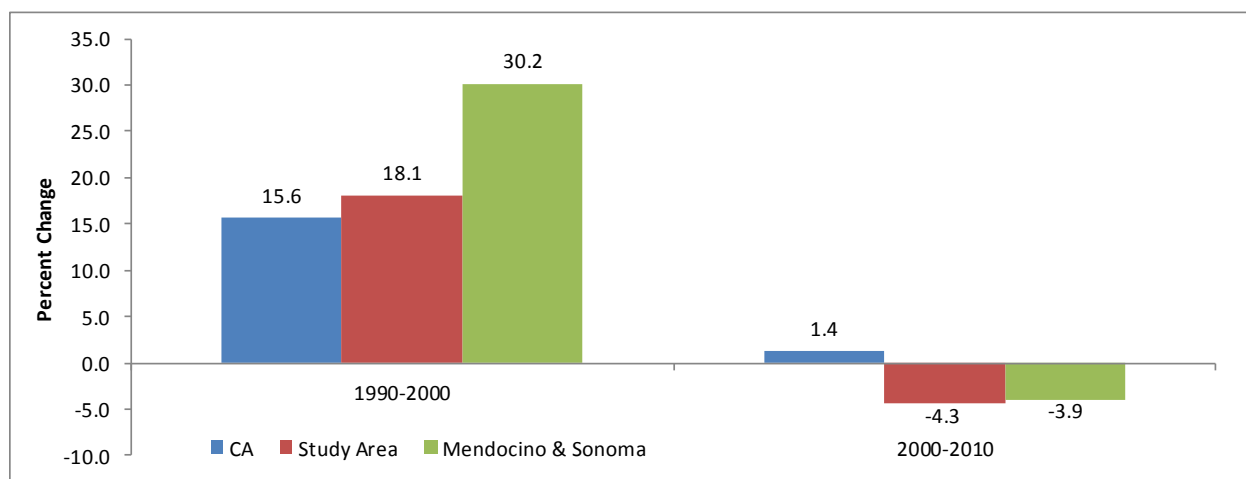


Figure 4.6-10. Total Employment in the Study Area versus California and Mendocino and Sonoma Counties 1990-2000 and 2000-2010

Proprietors' Income and Employment. When analyzing the potential impacts of sanctuary management strategies and regulations, it is a requirement under the Regulatory Flexibility Act to analyze the potential impacts on small entities, which are primarily small businesses. NOAA will conduct this separate analysis as part of the rulemaking process. Usually almost all businesses related to either the commercial fishing industry or the recreation-tourist industry are small businesses. Good indicators of the extent of small businesses in the study area are the extent of proprietors' income and employment.

In 2010, there were 756,000 proprietors employed in the study area making up 25% of total employment in the study area. The proprietors earned almost \$26.2 billion, which was almost 13% of the income earned by place of work in the study area (Table 4.6-9). The percent of proprietors' employment was higher in Mendocino and Sonoma Counties than the study area and higher in the study area than the U.S. for 2000 to 2010. The opposite trend is true for proprietors' income as a percent of total income (Table 4.6-9 and Figures 4.6-11 and 4.6-12).

Table 4.6-9. Proprietors' Income and Employment

Year/Area	Proprietor's Income (\$000)	%	Proprietor's Employment (000's)	%
2000				
Mendocino & Sonoma	2,466,614	12.6	82	33.4
Study Area	26,690,701	15.2	617	19.8
California	136,625,067	15.3	3,844	16.9
2005				
Mendocino & Sonoma	2,816,106	12.7	92	28.6
Study Area	29,655,806	15.3	686	22.7
California	168,214,490	15.4	4,261	21.1
2010				
Mendocino & Sonoma	2,166,644	9.0	93	30.1
Study Area	26,199,661	12.7	756	25.3
California	146,825,576	12.7	4,685	23.7

Source: U.S. Department of Commerce, Bureau of Economic Analysis,
Regional Economic Information System

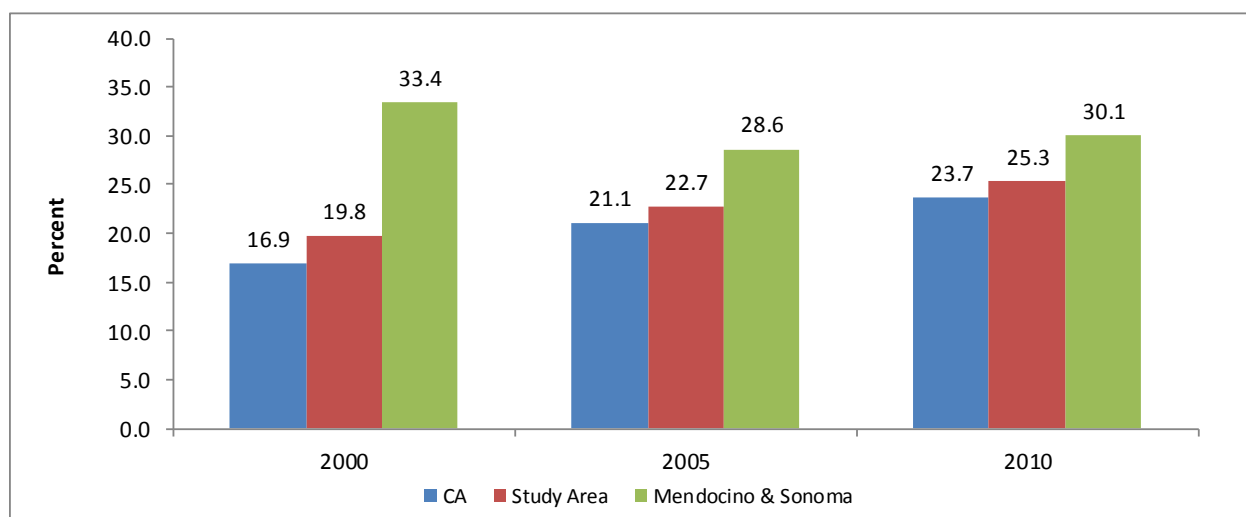


Figure 4.6-11. Proprietors' Employment as a percent of Total Employment in the Study Area versus California and Mendocino and Sonoma Counties, 2000, 2005 and 2010

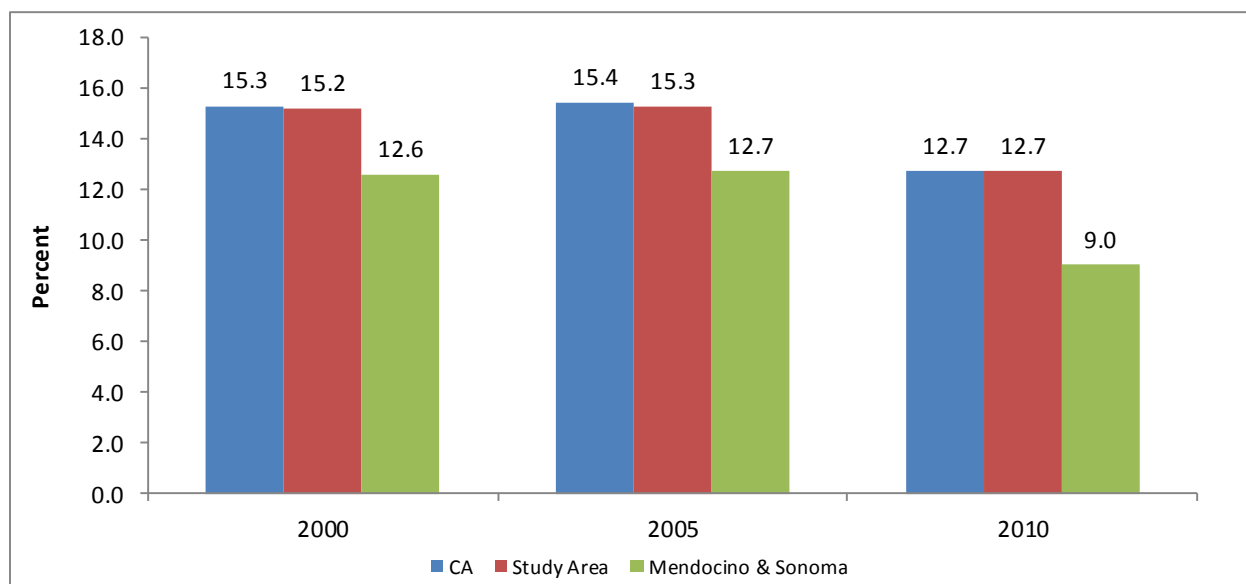


Figure 4.6-12. Proprietors' Income as a Percent of Total Income in the Study Area versus California and Mendocino and Sonoma Counties, 2000, 2005 and 2010

Personal Income and Employment by Industry Sector. The U.S. Department of Commerce, Bureau of Economic Analysis (BEA) in its Regional Economic Information System reports income and employment for different geographic areas by industry or economic sector using the North American Industry Classification System (NAICS) industry classification codes. The NAICS codes identify different sectors of the economy using codes up to four digits, the higher the number within a sector the more specific the industry. For example, “retail trade” is the 44-45 series. So at the 44-45 level, all retail trade is included. Code 441 is “motor vehicle and parts dealers” and code 442 is “Furniture and home furnishing stores.” For the counties in our study area, we only report at the highest level i.e. for each series only the “00” level of detail. Even here, for some counties within the study area, the information is classified as “D” for non-disclosure meaning the numbers cannot be reported because there are less than 10 firms in that industry of economic sector in the county. So when we add up across counties for the study area, if one county within the study area has less than 10 firms in a sector, the whole study area will be coded “D” for non-disclosure. If the entire study area has less than 10 firms in a given industry or economic sector, it is possible to request a special run by BEA for the study area totals. We have not done that here.

Personal Income by Industry. In 2010, the study area had a higher proportion of its personal income generated in the “Professional, scientific, and technical services” and “Finance & Insurance” sectors than the state of California and Mendocino and Sonoma Counties (Figure 4.6-13).

Employment by Industry. In 2010, the study area had a higher proportion of its employment generated in the “Professional, scientific, and technical services” and “Finance and insurance” sectors than the state and Mendocino and Sonoma Counties with a lower proportion from “Retail trade” and “Farm earnings” (Figure 4.6-14).

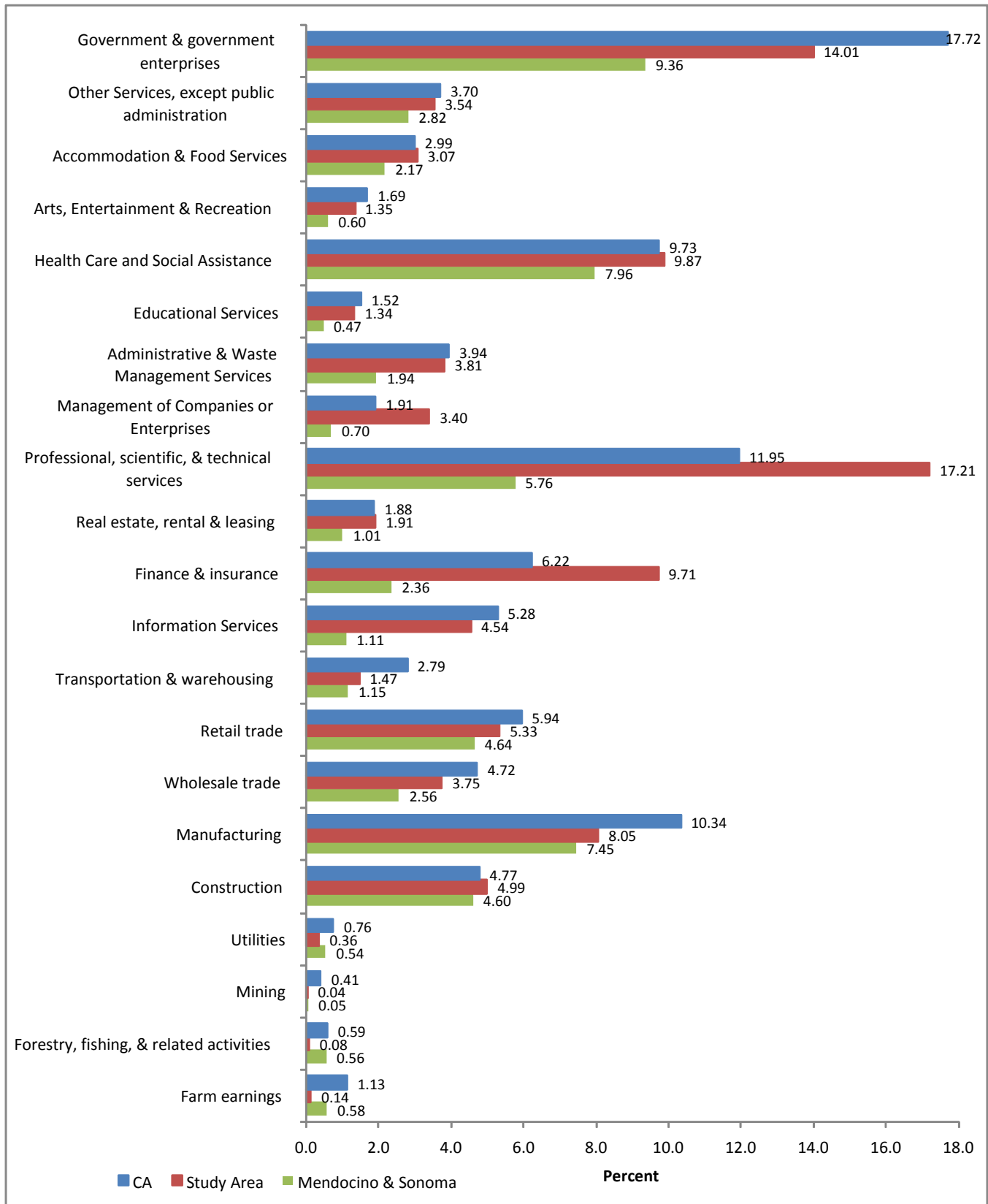


Figure 4.6-13. Percent of Personal Income by Industry for the Study Area versus California and Mendocino and Sonoma Counties, 2010

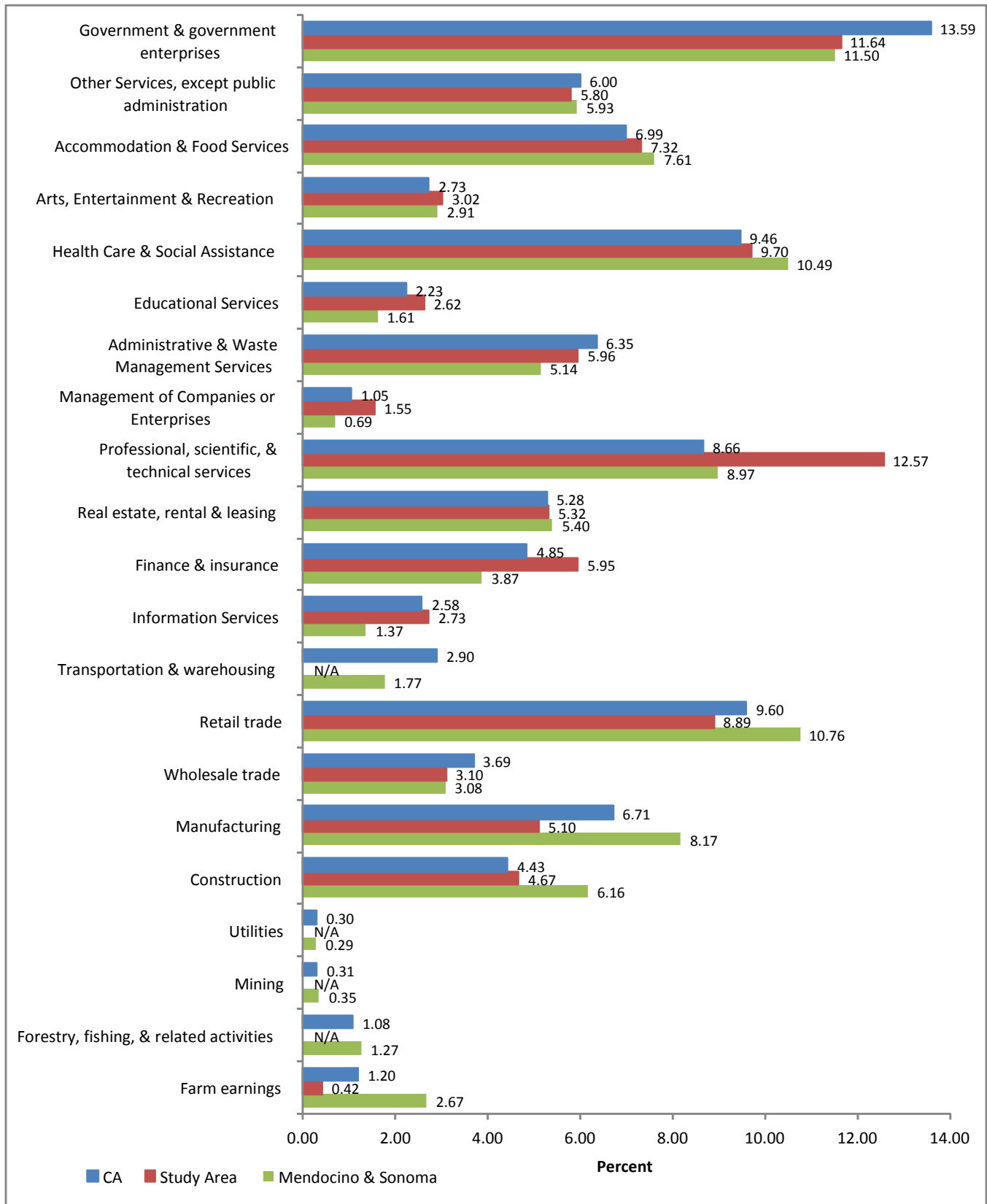


Figure 4.6-14. Percent of Employment by Industry for the Study Area versus California, 2010

Recreation and Tourism

The study area for recreation and tourism encompasses the proposed sanctuary expansion area and the adjacent shoreline in Sonoma and Mendocino Counties. Public access is included in this discussion and refers to access to the shoreline and Pacific Ocean. The description of recreational uses is focused on coastal recreational activities.

Public Access

About half of the 55-mile Sonoma County coastline is in government ownership, but not all of that land has public coastal access (Sonoma County 2013b).

The Sonoma County Regional Parks Department and the California Department of Parks and Recreation (California State Parks) own facilities as well as undeveloped land. Some large, varied sections of the coastline and the tidelands from Gualala to Jenner are open to the public, including North Jenner Beach, Fort Ross Historic Park, Salt Point State Park, and Gualala Point Regional Park. Public access is limited in other sections, most notably from Gualala Point Regional Park to Stewarts Point and within the privately owned Timber Cove subdivision. The Sea Ranch, south of Gualala, is another privately owned subdivision that offers limited public access at several points along Highway 1. There is some limited access to the Russian River between Duncans Mills and the river mouth, while the mouth is accessible from Jenner and the Goat Rock area. The south Sonoma coast is very accessible to the public. The California Department of Parks and Recreation owns coastal property from the Russian River to Bodega Head, with the exception of the privately owned Pacific View Estates and Gleason Beach subdivisions, a few individual parcels, and the Bodega Marine Laboratory. Numerous access points include parking lots, trails, trash receptacles and restrooms (Sonoma County 2013b).

Public access is limited in the 20 miles between Gualala and Manchester State Beach in southern Mendocino County. Most of the state and county beaches are in the northern part of this stretch around Point Arena. This includes the 1,130-acre Stornetta Public Lands, located at the mouth of the Garcia River. This property, which has been called one of the most significant parts of the Mendocino coastline, includes rugged cliffs, rumpled dunes and rolling meadows. In 2005, Larry Stornetta transferred title of the Stornetta Ranch to the Bureau of Land Management to ensure its long term protection and accessibility to the public. Recently, Congressman Jared Huffman introduced a bill to include these lands as part of the California Coastal National Monument (County of Mendocino 2013c).

Specific public access points are identified in the Sonoma County Local Coastal Plan, Coastal Element of the Mendocino County General Plan (County of Mendocino 2013b) and also in California Coastal Commission's California Coastal Access Guide (CCC 2003).

Recreational Uses

The waters and adjacent shoreline of the proposed expansion area offer a host of recreational opportunities. The scenic and rural coastline draws visitors from the greater bay area, state, nationally, and internationally. Most of the visitor use related to the expansion area is concentrated in adjacent coastal areas, particularly at the main access points distributed along the shoreline.

Recreation activities in the area include beach visitation, coastal hiking, photography, tidepooling, abalone diving, SCUBA diving (both consumptive and non-consumptive), recreational fishing (private boats, commercial passenger fishing vessels, shore based), whale and other marine wildlife watching, bird watching, surfing, recreational boating, camping, and sightseeing along the coast highway. Many of the visitors to this area stay overnight in campgrounds, a hotel, motel, bed and breakfast inn or vacation home rental along the coast.

Ocean uses in the proposed expansion area were estimated by NOAA staff members using information provided by regional experts in 2008-2009 as part of a broader Marine Protected Areas Center Ocean Uses Atlas Project. Spatial coverage of recreational uses in the proposed expansion area by national marine sanctuary is depicted in Table 4.6-10. These data represent broad-brush identification of areas over large distances, and focus on the dominant footprint patterns of use rather than more complex or localized issues (NOAA 2013).

Table 4.6-10. Spatial Coverage of Recreational Ocean Uses in Proposed Expansion Area Waters

Uses	Cordell Bank NMS % New Proposed Area	Gulf of the Farallones NMS % New Proposed Area
<i>Recreational Non-Consumptive Sector</i>		
Sailing	0	0
SCUBA/Snorkeling	0	1
Surface Water Sports	0	0
Swimming	0	0
Tidepooling	0	1
Wildlife Viewing at Sea	14	16
<i>Recreational Fishing/Hunting Sector</i>		
Hunting	0	0
Recreational Dive Fishing	0	4
Recreational Fishing from Boats	100	100
Recreational Kayak Fishing	0	7
Recreational Shore-Based Harvest	0	2
Shore-Based Fishing	0	2

Source: NOAA 2013.

Beach Visitation and Coastal Hiking

Beach visitation and hiking are popular activities especially in the southern part of the proposed expansion area at county and state beaches between Bodega Bay and Jenner. This area has several public beaches with easy access, and is close to major population centers in Sonoma County. While the north coast weather can be foggy in the summer, it usually burns off by midday and the cool ocean breezes make the Sonoma Coast a haven for visitors seeking to escape the inland heat (State Parks 2013a).

A network of trails on public lands along the coast provides easy access for hikers. This is a popular activity and visitors often walk along coastal bluffs and enjoy the spectacular coastal scenery. Due to budget cuts, many of the public parks have reduced hours and imposed seasonal closures in 2013.

Sonoma Coast State Beach (Park) is the most popular state park adjacent to the shore within the study region (Table 4.6-11), and is the second most visited coastal state park in California (See California 2013). The Sonoma Coast State Beach is a series of beaches separated by rock bluffs and headlands, extending 17 miles from Bodega Head to Vista Trail located 4 miles north of Jenner. Beachcombers, fishermen, sunbathers and picnickers can access the beach from more than a dozen points along coast Highway 1.

There are a number of coastal recreation areas near or partly within the study area. The California Department of Parks and Recreation manages Manchester State Beach (Park), which also contains an ocean or “underwater” component; Schooner Gulch State Park; Kruse Rhododendron State Natural Reserve; Salt Point State Park, which contains an ocean component; Fort Ross State Historic Park, which contains an ocean component; and Sonoma Coast State Beach (Park). Sonoma County Regional Parks manages Gualala Point Regional Park and Stillwater Cove Regional Park. The Sea Ranch Association manages coastal public access areas on Association property. The City of Point Arena manages Arena Cove and Pier, Centennial Playground and Fishermen’s Playground, and Rockwell Park. Many of these recreation areas offer access points, services and facilities for both day and overnight use of coastal and near shore areas. Boat launch facilities are described under Recreational Boating, later in this section.

Table 4.6-11 lists State Park attendance in the study area and Table 4.6-12 lists the Sonoma County Regional Park and Sea Ranch trails attendance in the study area; both tables also note which facilities have overnight use.

Table 4.6-11. Attendance at California State Parks Adjacent to the Shore in the Study Region (fiscal year 2010/2011)

Park Name	County	Total Attendance
Fort Ross State Historic Park*	Sonoma	224,242
Kruse Rhododendron State Natural Reserve	Sonoma	22,792
Manchester State Beach*	Mendocino	61,087
Schooner Gulch State Park	Mendocino	17,016
Sonoma Coast State Park	Sonoma	3,13165

*Has overnight facilities

Source: California State Parks 2013b.

Table 4.6-12. Attendance at Regional Parks and Sea Ranch Trails Adjacent to the Shore in the Study Region (fiscal year 2010/2011)

Park Name	County	Total Attendance
Gualala Point Regional Park*	Sonoma	68,675
Sea Ranch trails	Sonoma	53,039
Stillwater Cove Regional Park*	Sonoma	25,887

*Has overnight facilities

Source: Sonoma County Regional Parks 2013c.

Recreational Fishing

Recreational fishing is a significant industry and activity along the California coast. Fish and wildlife resources and uses, including recreational fishing, are managed by the California Department of Fish and Wildlife (CDFW), formerly California Department of Fish and Game (CDFG). Second only to Florida,

the state of California contains more than 2.7 million residents who saltwater fish (CDFG 2005). Various forms of recreational fishing are used throughout the north central coast study region, with recreational fishing from boats estimated to take place throughout the entire proposed expansion area, and recreational harvest from shore/shore-based fishing, and recreational kayak fishing and dive fishing occurring throughout the coastal waters in the study area in varying intensities depending upon the activity (NOAA 2013). It is likely that motorized personal watercraft (MPWC) operation is also used on a limited basis for recreational fishing in the proposed expansion area.

In 2000, approximately 440,000 saltwater anglers, mostly California residents, fished the Pacific Ocean off the coast of California from Monterey County north over 2.2 million days (Ehler, Leeworthy and Wiley 2003).

Recreational fishing is a major source of income for the tourism and recreation sector in the north central coast study region. The main boat-based modes of fishing include commercial passenger fishing vessels (CPFVs), private and rental skiffs, and kayaks (angling, diving or free diving). Most of the CPFV activity is out of Bodega Bay and targets salmon, crab and rockfish. Closures in specified depths for federally managed groundfish (including many species of rockfish) have been in place since 2001, and have redirected most recreational fishing for groundfish from deeper offshore reefs to shallower nearshore areas. Shore based modes of recreation fishing include beach and bank fishing, fishing from manmade structures, poke-poling, free-diving and shore picking and spear fishing. Primary target species for recreation fishing in the study region include Chinook Salmon, rockfishes, lingcod, cabazon, kelp greenling, California Halibut, sanddabs and albacore. There is also recreational harvest of Dungeness crab using traps, often in combination with trips for other target species (CDFG 2007). With area closures associated with the state's Marine Life Protection Act, some coastal areas are closed to recreational fishing.

Although there are not any recent studies for the expansion area, a survey conducted in central California may shed comparable light on interests for fishing in this area. The survey sampled from Monterey north, including several coastal ports in Monterey, Moss Landing, Santa Cruz, Half Moon Bay, and San Francisco Bay marinas. As presented in Table 4.6 13, the study indicated that residents' preferred mode of fishing was by use of private/rental boats or from the shore. Most nonresident anglers fished from party/charter boats (Ehler, Leeworthy and Wiley 2003). It is probable that fishing effort by private boats and charters would be a smaller percentage of total recreational fishing north of Bodega Bay due to the scarcity of ports or marinas between Bodega Bay and Arena Cove.

Table 4.6-13. Estimated Number of Days Fished and Participants in Central California by Mode and Resident Status (2000)

	Resident	Nonresident	Total
Total Days	2,074,628	92,377	2,167,005
Party/Charter Boat Days	198,267	39,429	237,696
Private/Rental Boat Days	963,959	30,961	994,920
Shore Days	912,402	21,987	934,389
Total Participants	387,927	51,221	439,148
Average Days Per Participant	5.3	1.8	4.9

Source: Ehler, Leeworthy and Wiley 2003.

Recreational harvest of abalone is a popular and economically important activity in the proposed expansion area. Free-diving and shore picking are the common methods to harvest red abalone from rocky intertidal and subtidal zones north of the Golden Gate Bridge. Free-divers enter the water from skiffs, kayaks, or shore and are prohibited from using SCUBA or hookah (air delivered to diver via above-water compressor and hose) equipment to harvest red abalone. Anglers also harvest red abalone by wading out into the shallow rocky intertidal areas at low tides and picking abalone off of the rocks. Popular diving sites in the expansion area include Fort Ross, Fort Ross Reef Camp, Salt Point, Sea Ranch, and Arena Cove where state and regional parks provide access and services for abalone fishing. However, during abalone season nearly every accessible cove in Sonoma and southern Mendocino Counties, where abalone effort is greatest, may experience harvesting (CDFG 2007). This fishery is managed by the CDFW and its abalone report card system generates data that provide both catch quantities and an approximate geographic distribution of the abalone catch. Table 4.6-14 lists the abalone report card landing sites and the annual average of estimated landings for 2002–2006. New regulations for harvesting abalone on the north central coast will be implemented in 2014 following a severe abalone die off in the fall of 2011. Also, some coastal areas associated with the State Marine Life Protection Act are closed to harvesting abalone.

Table 4.6-14. Abalone Report Card Landing Sites and Associated Average Annual Landings

Ref #	Report Card Site	Annual Average 2002-2006
1	Point Arena Lighthouse*	8,317
2	Arena Cove	10,528
3	Moat Creek	6,801
4	Schooner Gulch	613
5	Saunders Landing	1,212
6	Anchor Bay	5,443
7	Robinson Point	986
8	Gualala Point	1,047
9	Sea Ranch	12,610
10	Black Point	227
11	Stewarts Point	1,974
12	Rocky Point	459
13	Horseshoe Cove	1,823
14	Fisk Mill Cove	7,784
15	Salt Point	10,512
16	Ocean Cove	6,191
17	Stillwater Cove	3,858
18	Timber Cove	8,660
19	Fort Ross and Reef Camp	37,386
20	Jenner	2,350
21	Salmon Creek	1,032
22	Bodega Head	1,282
24	Point Reyes	616
Total		131,671

*The Point Arena Lighthouse report card landing site includes data from Stornetta Ranch which opened to public access in 2004. As a result of recent increase of effort at this site, averages from 2002–2003 and 2005–2006 are reported, however data from 2004 is excluded because the area opened part way through the abalone season.

Source: CDFG 2008.

CDFG began selling abalone report cards in 1998. Abalone report card sales from 1998 to 2005 remained fairly stable, ranging from 35,180 to 40,841, respectively. The proportion of all sport fishing license buyers who also purchased abalone stamps ranged from 28% to 33% between 1998 and 2005 (CDFG 2007).

Kelp Harvesting

Several scoping comments indicated that edible seaweed is harvested for consumption in the study area. Both edible seaweed harvest mentioned in scoping comments and commercial harvest are regulated by CDFW. Elsewhere in the state of California, commercial kelp harvest (typically giant kelp, *Macrocystis*) occurs in leased beds in waters no shallower than 30 feet and harvest occurs no shallower than 4 feet from the surface (typically 3 feet from the surface). In the proposed expansion area there are no active leases for commercial kelp harvest.

CDFW issues licenses (not leases) for edible seaweed harvest, which can be for personal consumption or for commercial sale. Limits set by CDFW are 10 pounds per person per day and two tons per year. Edible seaweed harvest is a growing use off the coast for many types of intertidal seaweed (e.g. Nori, Wakame, Kombu, Dulse, and Sea Palms). This type of harvest is done by hand in the intertidal area usually during low tide. Harvesters use knives, clippers, scissors to cut blades off the algal plant, typically leaving the bottom third of the plant so it can regrow.

SCUBA Diving

SCUBA diving is a popular recreational activity in the proposed expansion area especially in the area north of Fort Ross. This area typically has better underwater visibility and the near shore geology is mostly rock that provides interesting structure and supports healthy beds of bull kelp, algae, invertebrates and fishes. Salt Point State Park is a popular dive location with overnight camping and easy access to the water. Many of the campgrounds along the coast are crowded with divers in the summer and fall. Diving between storms in winter when ocean conditions are calm can offer some of the best visibility of the year when there are no plankton blooms that can limit visibility in the summer months. Near shore waters are accessed from shore, skiff or kayak and divers engage in spearfishing, photography or enjoying the spectacular underwater world of the north central coast. The coastal economy of this area relies on the steady influx of divers in the summer and fall.

Surfing

Ocean conditions north of Bodega Bay can be rigorous. With powerful swell, cold water and strong currents, many surf breaks in the area are demanding and not for novices. There are times, however, when conditions are not extreme and surfing occurs. Salmon Creek beach at the southern end of the proposed expansion area is a popular surfing destination. When the swell and tide are correct, hundreds of surfers can be in the water and the parking lots and turn outs will be filled with cars. Arena Cove is another surfing destination at the northern end of the proposed expansion area. Many of the other surf spots along this stretch of coast are remote and access is difficult, but experienced surfers find ways to access these areas.

Wildlife Viewing

Several onshore locations along the proposed expansion area are popular sites for viewing wildlife on different scales. Coastal promontories like Bodega Head draw hundreds of people a day during the gray whale migration period. In April, as mothers and calves swim to feeding areas in Alaska, they will sometimes be

very close to shore. There are many spectacular vantage points from high spots along Highway 1. In addition, several state parks have trails along coastal bluffs and viewing points for observing the gray whale migration and other wildlife. From many of these same vantage points observers can see harbor seals and sea lions lounging on coastal beaches or hauled out on rocks. The highway pull out north of Jenner is a

favorite place for visitors to observe harbor seals on the beach at the mouth of the Russian River.

Charter boat trips that originate in Bodega Bay also provide wildlife viewing opportunities offshore. Bodega Canyon is a frequent destination and trips usually focus on viewing pelagic seabirds like albatross and shearwaters that rarely come near shore, blue and humpback whales that seasonally visit the area in summer and fall, and a variety of other marine mammals including porpoise and dolphins. As shown in Figure 4.6-15, approximately 14% of the proposed expanded CBNMS and 16% of the proposed expanded GFNMS showed patterns of wildlife viewing from sea in 2008-2009, mostly west of the area from the mouth of Tomales Bay to Fort Ross (NOAA 2013).

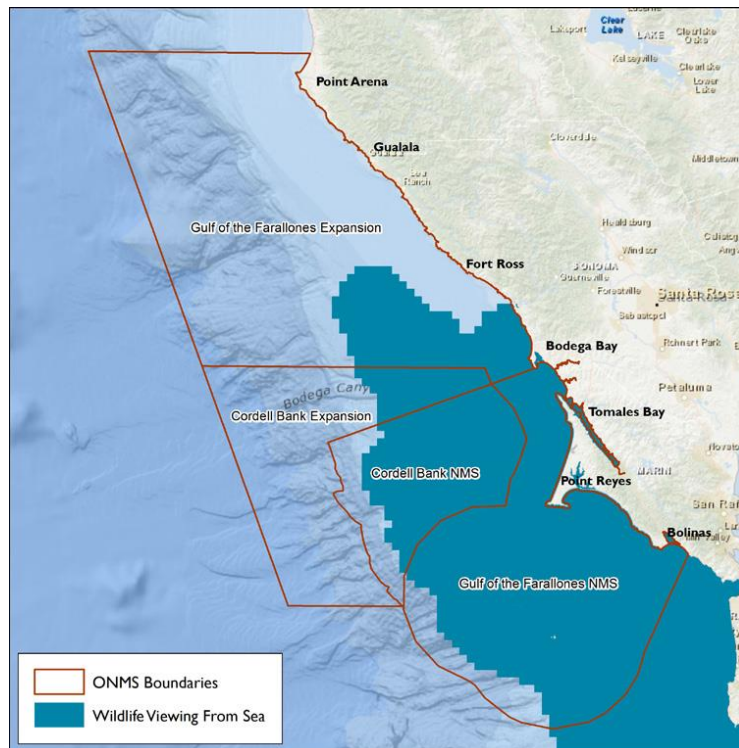


Figure 4.6-15. Wildlife Viewing from Sea Use Pattern in and Adjacent to Study Area 2008-2009 (based on data from expert knowledge) Source: NOAA 2013.

On a completely different scale, the rocky shorelines in the study area are teeming with life and can be enjoyed by visiting the tidepools during low tides. As the tide recedes, intertidal areas are exposed revealing dozens of different species of algae and an assortment of animals including barnacles, limpets, sea slugs, anemones, sea stars, urchins, crabs, chitons, abalone and sponges. Several of the state parks have docent led programs to help visitors safely observe the diversity of life in the intertidal zone.

There are numerous locations bordering the study area that are favorite places for bird watching. From Bodega Bay to Manchester Beach there are a variety of habitats that offer opportunities to see a diverse selection of birds. Coastal bluffs with shrubs and trees, sandy beaches and dunes, estuaries, rocky shorelines with near shore stacks, and high bluffs to view seaward offer opportunities for birders of all levels to see land birds, shorebirds, and pelagic species in one day.

It is the wild undeveloped nature of this region and the opportunity to view a diversity of wildlife that draws many people to this region of the California coast.

Recreational Boating

Recreational boating is enjoyed by residents and visitors in the proposed expansion area, using both motorized and non-motorized watercraft.

The most common motorized vessels used are power boats, but there is also limited use of MPWC in the region (see discussion below). Boat launch facilities for motorized vessels are available near the study area at Spud Point Marina and Doran Regional Park in Bodega Bay (Sonoma County Regional Parks 2013a), where the majority of motorized recreational boating in the study area occurs (see Figure 4.6-16); and adjacent to the study area at Ocean Cove (privately owned) (Ocean Cove Store & Campground 2013), Point Arena Pier (City of Point Arena 2013), Sonoma Coast State Park (California State Parks 2013c), Stillwater Cove Regional Park (Sonoma County Regional Parks 2013b), and Timber Cove (privately owned) (Redwood Coast Chamber of Commerce 2013). Pumpout facilities, mobile pumpout services and dump stations are discussed in under Water Quality (Section 4-02, Physical Resources).

Sailing, kayaking, windsurfing and kite-boarding also takes place at various locations in or adjacent to the study area, and enthusiasts may either bring their own equipment or rent equipment. Patterns of sailing in the study area was limited in 2008-2009, and mostly occurred near Bodega. There are a number of kayak rental outfitters along the Sonoma and Mendocino coasts, and some windsurfing rental outfitters are located inland. These small non-motorized watercraft may be launched more easily than motorized vessels, with access points too numerous to list. As with other on-water sports in the study area, safe enjoyment of both sports is dependent on appropriate wind and water conditions, and on the training and experience of participants.

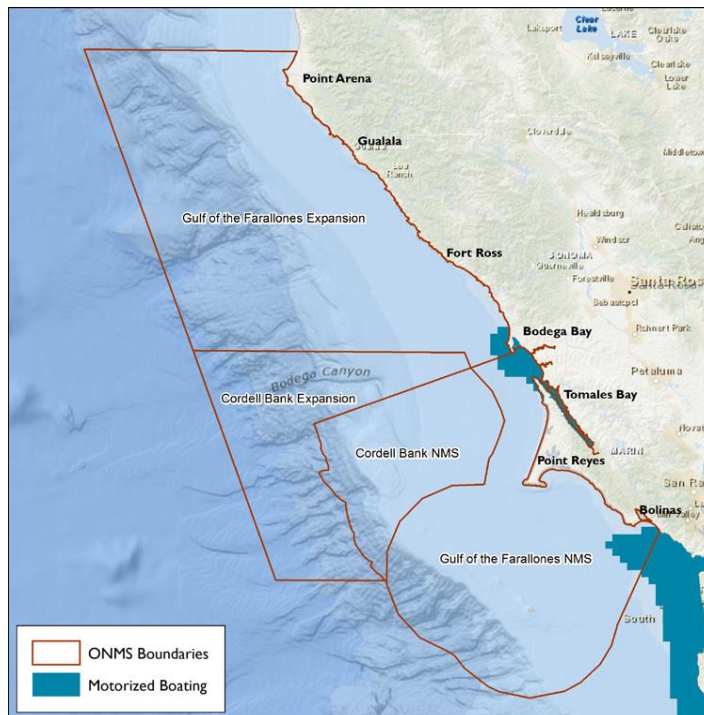


Figure 4.6-16. Motorized Boating Use Pattern in and Adjacent to Study Area 2008-2009 (based on data from expert knowledge). Source: NOAA 2013.

MPWC Use

MPWC, often referred to as "jetskis,"® include several small vessel designs that share similar performance characteristics. Within the proposed expansion area, MPWC are used for recreation including for surfing (to access remote offshore breaks and primarily for lifesaving purposes), fishing along the coast, and occasionally for abalone diving. These recreational uses occur along the coast, mostly within California State waters throughout the entire study area. Due to the steep, rocky shoreline and lack of harbors and ports in the study area, access points to deploy MPWC are limited and often not available due to seasonal closures, shoreline changes from storm activity, or other hydrologic and geomorphic factors. Some of the most extensive MPWC use occurs offshore of Sonoma Coast State Park.

Tourism

Tourism represents a portion of the local and regional economic condition, as tourism contributes to direct sales, employment and taxes. Travel expenditures provide the primary basis for assessing tourism.

In California, over the past few decades, a rise in the amount of money spent in California has been attributed to travel and tourism (CED 2011). After the recession of 2007-2009, California travel expenditures reached over \$106.4 billion in 2012, which is a 4.5 percent increase from the previous year (in current dollars) (Runyan 2013).

Looking at the local level at the two primary affected counties (Mendocino and Sonoma), travel expenditures in Mendocino County were \$313.9 million in 2011 (including accommodations, eating and drinking, retail sales, transportation and recreation, not including indirect revenues) (Runyan Associates 2013). Travel-generated employment was estimated at 4,790 jobs in 2011, which represents about ten percent of the total employment in the county. The county has generally experienced fluctuations in travel-generated employment similar to trends statewide.

Total annual tourism earnings (all the earnings of employees and business owners over the course of a year that can be attributed to travel expenditures, including wages and salaries, earned benefits, and proprietor income) were \$118.2 million in 2011 in Mendocino County.

Tax revenue (in the form of local sales taxes, transient occupancy taxes, fees for service, fines or other sources) generated by travel expenditures is a measure of the fiscal benefit to local governments that is derived from travel and tourism. Total travel-related tax revenues in Mendocino County were \$20.3 million in 2011.

Tourism in Sonoma County in 2011 had a direct economic impact of more than \$1.4 billion annually, and represented about 17,000 local jobs. Total annual tourism earnings were \$442.7 million in 2011. Tax revenues generated by travel expenditures in 2011 are estimated at \$94 million; those funds are used for general funds for government, regional parks, arts and cultural organizations, affordable housing, and public safety (Runyan Associates 2013).

Specific data on coastal-related tourism economic effects is not available.

Land Use and Development

This section describes current land uses along the coast adjacent to the study area not described in other sections. Land use in the coastal areas of Mendocino and Sonoma Counties that are adjacent to or could be affected by the proposed action mainly consists of rural coastal communities with residential/industrial/civic/visitor serving/mixed uses, rural and remote residential uses, open space (public or quasi-public) uses, and agriculture uses.

The City of Point Arena and the unincorporated communities of Gualala, The Sea Ranch, Jenner and Bodega Bay are the largest coastal communities in the region, with other unincorporated, small communities scattered along the coast, including those at Manchester, Anchor Bay, Stewarts Point, Timber Cove, and Salmon Creek. There are harbor facilities and infrastructure at the City of Point Arena and the village of Bodega Bay.

Designated open space areas include the California National Coastal Monument (island, rocks, pinnacles and reefs offshore of the California coast) and Stornetta Public Lands, managed by the U.S. Department of the Interior, Bureau of Land Management (BLM); public coastal access areas, managed by The Sea Ranch Association; as well as numerous State, county and city parks (see Recreation, below).

Other uses in and adjacent to the study area include various types of agriculture, with livestock grazing prominent along Highway 1; forest land; commercial fishing (see Section 4.4, Commercial Fishing and Aquaculture); infrastructure to support residential and other developments; transportation; and telecommunications (County of Mendocino 2013a; County of Mendocino 2013b; Sonoma County 2013a; Sonoma County 2013b). In this area, Highway 1 is the main road, with smaller roads connecting with it, and there are three airports relatively close to the coastline: Lofty Redwoods Airport (private) (AirNav.com 2013a), Ocean Ridge Airport (public) (AirNav.com 2013b) and The Sea Ranch Airport (private) (AirNav.com 2013c). In addition to these airports, private and commercial aircraft originate from other airports in California and beyond, then transit through the airspace in the study area.

There are two active fiber optic telecommunications submarine cables in the area, which land onshore at the Manchester Cable Station (Telephone Central Office 2013), constructed as part of the Japan-U.S. project in 2001 (Submarine Cable Networks 2013). Onshore, the cables connect with the cable station inside a protective bore; this bore extends about a mile offshore. Seaward of that point to about a depth of 6,000 feet of seawater, the cables are buried in about one meter of sediment. These cables require periodic inspection and maintenance. There are three additional, unused AT&T conduits to the cable station as well, intended for future potential expansion. Four out of service cables (two fiber optic, one coaxial, and one unknown type) remain in this area as well; these were installed between 1957 and 1992 (Telephone Central Office 2013; Lott 2013.)

Research and Education

Research

Research is conducted within the proposed expansion by a wide array of public and non-profit groups, including: academic institutions, non-profit and community based organizations, regional, state and federal agencies, and citizen-science groups. Various studies include: monitoring for pollutants, water quality and impairment factors including temperature, sedimentation and gravel mining, kelp bed productivity, monitoring intertidal and subtidal communities, oceanography including upwelling and sea surface temperature, wave, wind and surface current monitoring, bird and mammal population distribution, status and trend and potential disturbance factors, fisheries assessment, and substrate and habitat mapping. Known research activities and agencies/groups conducting the research include the following:

- BLM, California Coastal National Monument, in partnership with California State Parks, Stewards of the Coasts and Redwoods, The Sea Ranch Association and Task Force, Madd River Consulting, City of Point Arena, Mendocino Coast Audubon Society, and Point Arena Lighthouse Keepers – Abundance and distribution of coastal birds and mammals, reduction of disturbance, and preservation of coastal cultural resources;
- Bureau of Ocean Energy Management – Seafloor mapping, abundance and distribution of marine birds;
- CDFW – Monitoring and assessment of the distribution and abundance of priority species including sport and commercial fish, abalone, seagrasses, and kelp bed abundance and distribution;

- California State University at Monterey Bay – Baseline assessment of state marine protected areas, designated under the Marine Life Protection Act, using remotely operated vessel (ROV) surveys to characterize soft and rocky shallow and deep-water habitats;
- Central and Northern California Coastal Ocean Observing System – Data consolidated on a web portal from a consortium of many marine research individuals, academic institutions, state and federal ocean monitoring programs;
- Ecotrust – Baseline assessment of state marine protected areas designated under the Marine Life Protection Act, assessment and quantification of recreational and sport uses of nearshore and coastline of San Mateo, San Francisco, Marin, Sonoma and Mendocino Counties;
- U.S. Environmental Protection Agency in partnership with NOAA and State Regional Water Quality Control Board – Offshore and coastal pollutants, Mussel Watch, assessment of pollutants, water temperature, sedimentation and siltation of impaired bodies of water including the Russian and Garcia Rivers;
- Farallones Marine Sanctuary Association – Baseline assessment of state marine protected areas designated under the Marine Life Protection Act, Long-term Monitoring Program and Experiential Training for Students, student and citizen science monitoring key intertidal species and mole crab (*Emerita analoga*) at Salmon Creek;
- The Marine Mammal Center and California Academy of Sciences – Research on marine mammal health in order to understand the causes of marine mammal strandings, and links to ocean health and veterinary techniques;
- National Marine Fisheries Service: Northwest Fisheries Science Center, Southwest Fisheries Science Center, Pacific Marine Environmental Laboratory, and Office of Protected Resources, Marine Mammal Stranding Network:
 - Assess juvenile rockfish recruitment every year and every three years they survey adult rockfish populations, ecological linkages and economics;
 - Assess Pacific Coast groundfish stock assessments, ecological linkages and economics, and habitat protection;
 - Assess seabird and mammal populations and distributions throughout the Exclusive Economic Zones;
 - Assess harmful algal blooms along the West Coast of North America;
 - NOAA Coastwatch monitors sea surface temperature and upwelling indices at Point Arena;
 - Assess upwelling and ocean acidification;
 - Research stock assessments, population dynamics, ecological linkages, and economics of Pacific coast groundfish and Pacific salmon;
 - Research and monitoring of mortality, detection and response to Unusual Mortality Events, and causes of mortality in marine mammals;
 - Develop and implement recovery plans for endangered and threatened species; and
 - Assess biogenic habitat, including kelp beds, marine and estuarine sea grasses, deep-sea corals and sponges

- Ocean Imaging:
 - Baseline assessment of state marine protected areas, designated under the Marine Life Protection Act
 - Aerial imaging, multispectral analyses to assess coverage of macroalgae, plants and bottom substrates in subtidal and intertidal ecosystems
- Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), in partnership with University of California and Stanford University – Interdisciplinary research and monitoring of large-scale coastal processes and subtidal and rocky intertidal ecosystems, using acoustic Doppler current profilers and field assessment of fish and intertidal plants, algae and invertebrates, baseline assessment of state marine protected areas designated under the Marine Life Protection Act;
- Point Blue Conservation Science (formerly Point Reyes Bird Observatory Conservation Science), in partnership with CBNMS, GFNMS, San Francisco State University, and Sonoma State University – Throughout most of Sonoma, Marin, San Francisco, and San Mateo Counties, monitors oceanographic conditions and how they relate to the distribution and abundance of krill, seabirds, whales and sea turtles, also assesses vessel activities and potential resources at risk from vessel strikes and oil pollution, assesses oceanographic frontal zones, and abundance and distribution of surface jellies (during several cruises, conducted surveys and collected samples in the CBNMS expansion area and over the rocky feature "the football" in the GFNMS expansion area);
- Reef Check – Baseline assessment of state marine protected areas, conducts shallow subtidal reef surveys for the baseline characterization and monitors the density of key fish, invertebrates, and algae indicator species;
- Russian River Estuary Management Project Pinniped Monitoring Plan (Sonoma County Water Agency and Stewards of the Coast and Redwoods 2011) – Monitoring pinniped haulouts near the Russian River at North Jenner and Odin Cove, to the north, and Pocked Rock, Kabemali, and Rock Point, to the south of the river, and Jenner logs, Patty's Rock, and Chalanchawi in the estuary.
- Sonoma County Water Agency – Monitoring water rights, flows and influences on fish habitat and species, including endangered and threatened species, assessment of effectiveness of habitat restoration projects;
- Sonoma State University, in partnership with University of California – Baseline assessment of state marine protected areas, characterization of sandy beach ecosystems and linkages between sandy beach and other nearshore ecosystems, including shorebird and beach wrack interactions;
- Stanford University and San Jose State University – Conducts population distribution and abundance studies for vertebrate, which includes tagging of pelagic predators, placing satellite tracking devices on sharks, whales, pinnipeds, fish, birds, reptiles and mammals, to determine key habitats;
- University of California, Davis Bodega Marine Laboratory – Physical oceanographic research regarding toxicology, biochemistry, molecular biology, physiology, and pathology of salmonids, abalone, ocean acidification *in situ* and laboratory experimentation and operates Bodega Ocean Observing Node, a surface current ocean observing system.

Education

Education and outreach activities along the coastal communities are conducted through various agencies and non-profit organizations. The BLM-administered California Coastal National Monument extends along the entire stretch of coast and has varying levels of partnership and educational activities in communities along the coast. There are three State Park visitor centers where coastal ecology and/or maritime heritage are highlighted, including the Sonoma Coast Visitor Center in Jenner, the Salt Point State Park Visitor Center, and the Fort Ross State Historic Park Visitor Center; interpretive signage is also located in this region. The Fort Ross State Historic Park's non-profit association, the Fort Ross Conservancy, provides support for interpretive and education programming, focusing on the rich maritime heritage in that location. Sonoma County Regional Parks operates a visitor center on the north end of The Sea Ranch, bordering the Gualala River Regional County Park. Within The Sea Ranch private community, the California Coastal National Monument stewards publish a trail guide for the trails that wind throughout the coast and facilitate public walks and talks on the public access points throughout The Sea Ranch.

On the north end of the study area, the Point Arena Lighthouse is owned, operated and maintained by the Point Arena Lighthouse Keepers. This group facilitates preservation and education about the historical and present day uses of the coast with docent led tours, overnight facilities, and a visitor center gift shop. The non-profit Stewards of Coast and Redwoods works closely with State Parks in the southern Sonoma coastal parks providing docents, interpretation, student programming and public programming. Coastal education grants that are available in this region include, but are not exclusive to: the National Marine Sanctuaries' BWET and Ocean Guardian programs, and the California Coastal Commission's Whale Tail grant program. There are a few small schools that serve the K-12 student population on the coast in Point Arena, Jenner, Manchester, Annapolis, and Cazadero as well as a few outdoor education facilities. The Point Arena Community Charter school is active in coastal stewardship education with classes that focus on becoming active coastal stewards. The Coastal Commission's Coastal Access guide (CCC 2003) highlights the public access points along the coast.

Passive Economic Use

Economists have long recognized a special class of non-market economic values for natural resources and the environment referred to generally as *nonuse* or *passive use* economic value. See Kopp and Smith (1993) for a detailed discussion. These values are widely accepted as legitimate values to include in benefit-cost analyses of environmental regulations. The term *passive use* has become more popular than the term *nonuse* because it is recognized that for people to have value for something they must have some knowledge about what they are valuing. People learn about natural resources or the environment they are asked to value through books, newspapers, magazines, newsletters, radio, television and other media sources. The people don't actually visit the sites and directly use the protected resources; they consume them passively through the many indirect sources. The values have been referred to in the literature as option value, bequest value and existence value to clarify people's underlying motives for their willingness to pay. For nonconsumptive users and passive users, the conditions of the ecosystem are important for determining the benefits of marine reserves. Marine reserves are known to change the status of the habitats protected and often result in changes in community structure and increased biodiversity. Also, one of the main benefits is the possibility of protecting a different functioning ecosystem (i.e., a more natural system with minimum human influence). These may be conditions for which these user groups would have a willingness to pay.

Passive economic use value is recognized as potentially the most important economic value of national marine sanctuaries. See Wiley (2003) for a detailed discussion about the use of this value in national marine sanctuaries and Bishop et al (2011) for the estimation of these values for the Main Hawaiian Islands coral reef ecosystem.

The following relevant definitions are used in the study of passive economic use values.

Consumer's Surplus: The amount that a person is willing to pay for a good or service over and above what they actually have to pay for a good or service. The value received is a surplus or net benefit. For natural resources, for which no one owns the resources and cannot charge a price for use of the resources, consumer's surplus is referred to as a "nonmarket economic value" since the goods and services from the natural resources are not traded in markets. Consumer's surplus is applicable to both use and passive use value.

Option Value: The value to current non-users who would be willing to pay an amount to ensure possible future use. This value is based upon uncertainty about both their future demand and the state of future supply. One can think of this like buying an insurance policy for future use. Weisbrod (1964) first introduced the concept of option value. Bishop (1982) extends and further clarifies this concept.

Quasi-Option Value: The value of preserving options for future use given some expectation of the growth of knowledge. Quasi-option value is positive when there are uncertainties about the future benefits of preservation and negative when the uncertainties are about future development issues. Examples are issues about future scientific discoveries or commercial applications that might arise from future study. Fisher and Hanemann (1987) discuss and clarify this concept. To the extent that consumptive uses might eliminate certain resources, this concept becomes an important potential benefit of marine reserves.

Bequest Value: The value to people that never plan to visit, but would be willing to pay an amount to ensure that future generations can experience the area in a certain protected condition.

Existence Value: The value to people who never plan to visit, but would be willing to pay an amount to ensure the resource exists in a certain protected condition. Krutilla (1967) first introduced the concepts of bequest and existence values. Brookshire, Eubanks and Randall (1983) discuss important issues in estimating these values.

Economic Rent: A return on investment over and above a normal rate of return on investment. A normal rate of return on investment is that rate of return in which incentives are such that capital will neither outflow or inflow into the industry.

4.6.2 Regulatory Overview

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations

On February 11, 1994, President Clinton signed EO 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations. The purpose of this order is to require federal agencies to identify and avoid disproportionate impacts on minority or low-income communities. In compliance

with this EO, the socioeconomic environmental consequences section addresses environmental justice issues.

Executive Order 13045, Protection of Children from Environmental Health or Safety Risks

In April 1997, President Clinton signed Executive Order (EO) 13045, Protection of Children from Environmental Health Risks and Safety Risks. This EO requires federal agencies to identify, assess, and address disproportionate environmental health and safety risks to children from federal actions.

California Coastal Act of 1976, Cal. Pub. Res. Code § 30000 et seq.

The California Coastal Act of 1976 defines the “coastal zone” as the area of the state that extends 3 miles seaward and generally about 1,000 yards (910 meters) inland. In particularly important and generally undeveloped areas, where there can be considerable impact on the coastline from inland development, the coastal zone extends to a maximum of 5 miles (8 km) inland from mean high tide line. In developed urban areas, the coastal zone extends substantially less than 1,000 yards (910 meters) inland.

The Act establishes policies guiding development and conservation along the California coast. The Coastal Act requires that local governments lying wholly or in part within the coastal zone prepare a Local Coastal Program (LCP) for its portion of the coastal zone. LCPs implement the California Coastal Act by establishing plans that are consistent with the Coastal Act. A Local Coastal Program is defined by Coastal Act Section 30108.6 as “a local government’s (a) Land Use Plans, (b) zoning ordinance, (c) zoning district maps, and (d) within sensitive coastal resources areas, other implementing actions, which, when taken together, meet the requirements of, and implement the provisions and policies of, this division at the local level.” Almost all development within the coastal zone, which contains many wetlands, requires a coastal development permit from either the Coastal Commission or a local government with a certified LCP.

County and City Plans

The Mendocino County General Plan (County of Mendocino 2013a) and zoning regulations govern land use along the coastal areas in Mendocino County; the Local Coastal Program for the county serves as an element (County of Mendocino 2013b) of the General Plan (County of Mendocino 2013d). The Point Arena City Local Coastal Plan (LCP) and two segments of the Mendocino County LCP have been certified by the California Coastal Commission. The Pygmy Forest segment of the Mendocino County LCP has not been certified by the Coastal Commission, which retains original jurisdiction over this segment (California Coastal Commission 2012).

The County of Sonoma General Plan (Sonoma County 2013a), zoning regulations and LCP (Sonoma County 2013b) govern land use along the coastal areas in Sonoma County. The County of Sonoma LCP, part of the County’s Local Coastal Program, has been certified by the California Coastal Commission (California Coastal Commission 2012).

Other Regulatory Requirements and Permit Processes

Other regulatory requirements and permit processes that affect land use in the study area include regulation of wetlands under Section 404 of the Clean Water Act and regulation of navigable waters under Section 10 of the Rivers and Harbors Act by the USACE; the regulations, plans and management procedures of the open space management authorities mentioned above; and California State Lands Commission

management of public lands under its jurisdiction, pursuant to the California Environmental Quality Act (California State Lands Commission 2013).

4.6.3 Impact Assessment Methodology

Criteria to determine the significance of impacts associated with socioeconomic, demographic, and environmental justice issues are based on federal, state, and local standards and regulations. Impacts are considered to be significant if the proposed action were to result in:

- Substantial changes in unemployment rate;
- Substantial changes in total income;
- Substantial changes in business volume;
- Changes in the local housing market and vacancy rates, particularly with respect to the availability of affordable housing;
- Conflicts with the objectives, policies, or guidance of federal, state, and local plans;
- A conflict or inconsistency with established land or water use plans (e.g., county plans);
- A substantial change in existing land or water uses;
- An interference with the public's right of access to the sea;
- A long-term preemption of a recreational use or substantial temporary preemption during a peak use season; or
- Disproportionately high and adverse human health or environmental effects on minority or low-income populations.

Socioeconomic, demographic, land use, recreation and environmental justice data in and around the sanctuary boundaries were examined to determine their sensitivity to proposed action impacts.

The method of analysis applied to the socioeconomic and environmental justice issue areas is qualitative since there is very little quantitative information to assess the proposed action and alternatives.

Social impacts and environmental justice are part of the larger issue of the impacts of regulations on equity and fairness. Social impacts often occur when economic and financial impacts on individuals and firms are large enough to leading to social disruptions and social ills like increased substance abuse, domestic violence, general increases in crime, and general negative impacts on the social fabric of communities. Environmental justice is about impacts involving disproportionate impacts on low income or minority populations.

4.6.4 Environmental Consequences

In evaluating the proposed action and alternatives against the significance criteria listed above, the following determinations were made:

- None of the alternatives would have the potential to cause changes in unemployment rates, personal or business income, housing or population. Proposed expansion of the CBNMS and GFNMS would not generally affect demographics of the study area.

- None of the alternatives would lead to any negative impacts on environmental justice. Expanding the sanctuary boundaries is expected to result in long-term beneficial impacts on local residents (including low-income and minority populations), as well as on the health and safety of children. Therefore, impacts on environmental justice are not discussed further in this impact analysis.
- For social impacts, the impacts across all regulations for all regulatory alternatives are not expected to rise to the level that any negative impacts would occur. Again, it is most likely there would be small positive impacts from increased protections provided by the added regulations for the sanctuary expansion area. For MSA National Standard 8,¹ community and social impacts would not be expected to rise to a level requiring a full social impact analysis. Therefore social impacts are not further discussed in the impact analysis.
- The alternatives would not conflict with federal, state or local plans, policies or regulations, including county land or water use plans, nor would they result in violations of NOAA regulations. Expansion of the sanctuaries is intended to offer additional resource protection, consistent with existing federal and state policy. Therefore, these issues are not addressed further in this impact analysis.

The following analysis focuses on human uses that may be potentially affected. In addition, passive economic use value is evaluated.

Proposed Action

Recreation and Tourism

Expanding CBNMS and GFNMS will not adversely affect public access to the shoreline as there are no prohibitions against public access. Ocean access will remain unchanged except for the establishment of designated zones and access routes for MPWC use in GFNMS (see below). Designating the waters off of Sonoma and Mendocino Counties as national marine sanctuaries would be expected to have beneficial effects on recreation and tourism overall. Sanctuary status may serve to attract visitors to the area and provide better quality resources in the future for residents of the area engaging in recreation activities in the proposed expansion area. It is likely that increased awareness of the coastal resources would occur through sanctuary educational information and programs. Sanctuaries across the U.S. generally increase recognition of their unique and remarkable natural and cultural resources, which lead to increased tourism opportunities (NOAA 2012). The expanded sanctuary boundaries would provide added protection to the natural resources that contribute to the area's value as a recreation-tourist destination, while not restricting non-consumptive activities such as boating, wildlife viewing and coastal access. This could result in a beneficial impact on recreation and tourism. Employment opportunities from increased tourism and recreation related activities include jobs related to the need for lodging, food, boating, transportation, guide services, and other incidentals to accommodate travelers interested in coastal activities and opportunities. In addition, local residents of the area engaging in recreation activities also spend funds on food, bait and tackle, oil and gas, sports equipment, equipment maintenance and repair, boat ramps and marina fees, and other incidentals related to their recreation activities.

¹ The Magnuson-Stevens Act (MSA) National Standard 8 refers to minimizing adverse economic impacts on fishing communities and ensuring continued access to their fisheries.

All participants in recreation-tourism receive non-market economic value from their recreation activities as well. Option value is also possible for those who are not current users but are willing to pay to have the option of using the resources in the future. Resource protection offers opportunities for increases in these values. Relevant proposed regulations are discussed individually in the following subsections.

Discharge Regulations

Establishing discharge regulations in the expansion area would be expected to provide an overall beneficial impact, by limiting pollution in the ocean environment, which would benefit tourists and recreational ocean users. Recreational boating would be subject to the vessel discharge prohibitions outlined in the proposed action. Section 4.8, Marine Transportation, includes information on the existing regulatory regime for vessel discharge and impacts on marine transportation vessels from the proposed action's discharge regulations, which would be expected to be minor and less than significant. Vessels for recreational use are normally smaller than those used in the marine transportation industry, but the regulatory regime for vessel discharge also generally applies to vessels used for recreation, except for those specific regulations that exclude recreational vessels and/or apply to other classes of ships (such as cruise ships or large ships that hold 300 gross tons or more).

Section 312 of the Clean Water Act (CWA) (33 U.S.C. § 1322) requires the use of Marine Sanitation Devices (MSDs) for all vessels within 3 miles of the coast if equipped with an installed toilet. Vessels 20 meters (65 feet) and under may use a Type I, II, or III MSD. Vessels over 65 feet in length must have a Type II or Type III MSD. Smaller vessels may have MSDs (but are not required to), or may have portable toilets, portable sewage receptacles, or no toilet facilities. Beyond 3 miles from shore, under current federal regulations, vessels may discharge treated or untreated sewage from any type of MSD. Currently, graywater discharge from recreational vessels is allowed in the expansion area.

With implementation of proposed sanctuary regulations, most discharges would be prohibited throughout the expansion area. There would be exceptions for sewage discharged through a Type I or Type II MSD and for clean graywater discharge; sewage and graywater are the two most common recreational vessel discharges. The proposed discharge regulations would require that recreational boat operators dispose of harmful matter and other prohibited discharges outside of the sanctuary or at shore side pumpout facilities or dump stations, and vessel operators would be required to lock all MSDs in a manner that prevents discharge or deposit of untreated sewage. Some of the effluent would likely have to be discharged at harbor or marina pumpout facilities which could place additional burdens on them to accommodate the larger amount of waste disposed dockside. Portable sewage receptacles could be deposited in a dump station or other sewage reception facility. Although onshore pumpout facilities and dump stations are limited, due to the small scale of recreational boating and existing regulations regarding discharges, this incremental additional burden would be less than significant. Sewage and graywater discharges could also be made outside sanctuary boundaries. Should a vessel owner or operator choose to install an MSD or install or upgrade a tank for sewage or graywater to comply with sanctuary regulations, there would be one-time costs for purchase of the equipment and installation, and periodic costs for maintenance. Should a pumpout facility be used, there could be a cost each time to pump sewage or graywater from the vessel. There may also be a cost to some recreational boaters of the additional amount of time and/or fuel it would take to visit a pumpout or dump station facility or transit to outside national marine sanctuary boundaries to make a discharge. Due to these factors, the proposed action has the potential to cause some adverse

socioeconomic effects on recreational boating. However, since most recreational boating occurs relatively close to shore and discharges in State waters (3 miles) are already regulated by the CWA, the potential adverse impact on recreational boating would be minor and less than significant. Furthermore, the proposed management plans include provisions to assist agencies and port, harbor and marina management entities in pursuing availability and use of pumpout facilities and dump stations.

Submerged Lands Regulation

Recreation and tourism would be expected to receive negligible to moderate benefits from the added protections to habitats, which produce a flow of services that support recreation-tourist activities. On the cost side, there could be indirect costs associated with acquiring permits or authorizations for the construction and maintenance of recreational docks, piers and moorings. Under the proposed action, authorization could not be used to allow recreational activities involving disturbing submerged lands within the line representing the 50-fathom isobath surrounding Cordell Bank. There are no known proposals for new docks, piers or moorings in the proposed expansion area (See Land Use and Development). The costs of compliance with the submerged lands alteration regulation are expected to be negligible and less than significant.

Introduced Species Regulations

The proposed regulations could benefit native populations of fish and therefore provide a benefit to the recreation-tourism industry. Currently there is no known use of non-native species for baiting by recreational fishermen so it is not expected there would be any costs of these regulations to the recreation-tourism industry.

Oil and Gas Development Prohibition

The prohibition on oil and gas development and production activities provides for opportunities of increased habitat and water quality that would benefit the recreation-tourism industry. However, there are no current or planned oil and gas activities in the expansion area so expected benefits are negligible. Similarly, since there are no current or planned oil and gas activities in the proposed expansion area, the expected costs (opportunity costs or lost benefits due to the potential negative impacts of the oil and gas activities) are also expected to be negligible.

MPWC Zones

The only recreational activity that would be specifically regulated by the proposed action would be MPWC. As described in the Project Description (Chapter 3), the proposed action includes the establishment of one seasonal and three all-year MPWC zones (see Figure 3.2-11) in the GFNMS expansion area. Motorized personal watercraft would need to be equipped with a GPS unit and would be allowed to launch only at the four specified access areas and each zone would be designed to keep MPWCs offshore to the extent practicable. There is existing MPWC use in the proposed GFNMS expansion area (as noted in the affected environment section) that may be impacted by the proposed action. Research on the use of MPWC in the study area indicates that the proposed MPWC zones are locations where MPWC may be currently used. In the event that MPWC use is necessary outside of these zones, it is possible that the proposed authorization process could be used to allow such an activity if already permitted or authorized by another agency, subject to sanctuary approval or a sanctuary permit could be issued. Given the existing relatively low

level of MPWC use in the expansion area and the proposed establishment of MPWC use zones, the impact on MPWC users is expected to be less than significant.

Land Use and Development

Proposed action regulations that may affect land use and development include discharge prohibitions, prohibitions against constructing on or otherwise altering submerged lands, introduced species restrictions and overflight restrictions. Since the GFNMS boundary would commence at the mean high water line and CBNMS boundaries would all be offshore, coastal onshore development would not otherwise be subject to sanctuary regulations. The overall adverse impacts on land use and development would be minor and less than significant.

Discharge Regulations

Establishing discharge regulations in the expansion area would provide an overall beneficial impact, by limiting pollutants in the ocean environment. The proposed discharge regulations would apply within sanctuary boundaries and would also prohibit the discharge of sewage from onshore land uses or discharge of any material beyond the boundary of the sanctuaries that subsequently enters a sanctuary and injures a sanctuary resource or quality. As noted in Section 4.2 (Physical Resources), there is one permitted source of discharge into the expansion area at Bodega Marine Laboratory. Since there are no other existing or proposed sewage outfalls or discharge points, no adverse impact would result from the proposed discharge regulations. In addition, the proposed authorization process and sanctuary permit regulations would provide the potential to allow discharges. In the authorization process, if the use was approved by another agency and the sanctuary agreed that the activity would be consistent with sanctuary uses, the use may be allowed.

As noted above, the proposed action includes a prohibition on discharging harmful matter from beyond the boundary of the sanctuaries that enters a sanctuary and injures a sanctuary resource or quality. This measure would help reduce potentially harmful pollutants such as oil, sewage and other hazardous materials from injuring sanctuary resources. Although many land uses, such as livestock grazing, agriculture and suburban runoff may discharge pollutants that enter the sanctuaries, the threat of any one discharge injuring a sanctuary resource is very small to negligible. The combination of the distance from the pollution sources and the strong mixing action of the ocean tends to rapidly dilute the pollutants from individual sources to a level that is not likely to cause injury to a sanctuary resource. The proposed regulation, therefore, is targeted at high volume or harmful discharges, such as oil, untreated sewage and hazardous spills. At this time, ONMS is not aware of any user or planned uses that, through their normal activity, would be impacted by this proposed regulation.

Submerged Lands Regulation

For any coastal construction involving submerged lands in the proposed expansion area, prohibited activities would include constructing any structure other than a navigation aid on or in the submerged lands of the sanctuaries placing or abandoning any structure on or in the submerged lands of the sanctuaries; or drilling into, dredging, or otherwise altering the submerged lands of the sanctuaries in any way, except: by anchoring vessels; while conducting lawful fishing activities; or mariculture activities conducted pursuant to a valid lease, permit, license or other authorization issued by the State of California. However, through the proposed authorization and sanctuary permit processes, some uses impacting submerged lands, such as dock, pier, or submarine cable construction or maintenance could be approved by the ONMS

Director, if the uses met the conditions for authorization or permit issuance. The existing special use permit process (allowed under Section 310 of the NMSA; 16 U.S.C. Section 1441) could also be applied to some uses.

In addition to being required to obtain permits from the CSLC and California Coastal Commission, local building permits and possibly the USACE (if the project would obstruct or alter navigable waters), uses involving construction on submerged lands would be required to go through the sanctuary authorization process. This extra step would have a minor adverse impact on land use and development in the expansion area, but would provide a means to allow activities that would otherwise be prohibited. It should be noted that the proposed action sanctuary boundary does not include the inner harbor area of Arena Cove, so shore uses in the cove would not be subject to sanctuary regulations. The use of moorings in sanctuary waters is considered placement of a structure on the submerged lands of the sanctuary. Any existing or proposed moorings within sanctuary boundaries would be subject to the authorization process or could possibly obtain a permit from the sanctuary, if permit conditions could be met.

The proposed action authorization process would apply to the existing sanctuary areas of CBNMS and GFNMS as well as the expansion area, and would provide a new mechanism to allow most uses affecting submerged lands otherwise prohibited by sanctuary regulations. However, no authorization would be allowed for uses on or within the line representing the 50-fathom isobath surrounding Cordell Bank.

Currently, the only regulatory provisions to allow otherwise prohibited activities are the permitting regulations and the NMSA provision for special use permits.

A sanctuary permit is limited to uses that: further research or monitoring related to sanctuary resources and qualities; further the educational value the sanctuary; further salvage or recovery operations in or near the sanctuary; or assist in managing the sanctuary. A special use permit could be issued in the existing sanctuaries or expansion area for activities on or in submerged lands of the existing sanctuaries and the expansion area if an activity involved: placement and recovery of objects for a public event on non-living substrate, placement, and recovery of objects related to commercial filming (may also be allowed for discharge), continued presence of submarine cables on or within submerged lands, disposal of cremated human remain (may or may not involve submerged lands), and fireworks. Special use permit conditions would also need to be met. The activity would need to be compatible with the purposes of the sanctuary and protect sanctuary resources, must be conducted for no more than five years (unless the special use permit is renewed), must not cause loss or injury of sanctuary resources, and must be covered by general liability insurance or a bond.

Under the proposed action, the sanctuary would have the ability to allow most activities involving construction on or use of submerged lands.

Introduced Species Regulations

Implementing stricter regulations to reduce the number of introduced species would have a beneficial impact on land use in the coastal areas. Invasive fouling organisms such as mollusks and sea squirts can attach themselves to any solid substrate within the coastal areas. Such attachment of fouling organisms causes increased repair and maintenance costs for operations that involve the use of submerged structures,

such as piers and docks. By reducing the number of invasive species in the expansion area, this measure may decrease existing and future repair costs.

Although the proposed sanctuary regulations include a prohibition against releasing introduced species, the proposed GFNMS authorization process could be used to allow aquaculture businesses in State waters. Impacts on aquaculture are addressed in Section 4.4 (Commercial Fishing and Aquaculture).

Overflight Restrictions

The proposed action would prohibit low flying (less than 1000 feet) over the two SWPZs in the GFNMS expansion area, as well as five SWPZs in the existing GFNMS (see Figure 3.2-4 through 3.2-9). Areas currently subject to overflight restrictions in the existing sanctuary boundaries are related to designated ASBS and specified locations; the changes in the areas or zones subject to these restrictions, as shown in Figure 3.2-4 through 3.2-7, would not materially change from existing conditions. In the GFNMS expansion area, the establishment of two zones would have a minor impact on flight patterns. These zones are relatively small in size and could either be avoided or flight could occur at higher elevations over them. FAA would have to update the aeronautical charts to reflect the GFNMS overflight changes. A sanctuary permit or special use permit could be issued for operation of aircraft below the minimum altitude over sanctuary restricted zones, if the relevant permit conditions were met. The overall impact is less than significant.

Research and Education

The proposed action may include additional research and education activities, as allowed by sanctuary regulations and as called for in the management plans. The proposed action should not affect ongoing research and education activities in the expansion area. If anything, a beneficial effect on research and education may take place, if including the area in the sanctuaries facilitates additional research and education programs or projects. For research, non-market economic value would include potential increases in quasi-option value. Positive market economic impacts for research and education activities are also likely to the extent the expansion area results in increased research and education activities.

Passive Economic Use

The additional protections offered by all the regulations in the proposed action would be expected to increase passive economic use value. Moderate benefits from each proposed regulation as well as the aggregate potentially significant benefits are expected. Because passive users do not directly use the resources, they would not suffer any costs.

No Action Alternative

The No Action alternative would result in losses in the potential benefits (opportunity costs) from increased protection from sanctuary regulations and from sanctuary programs and projects. Similarly, the benefits associated with this alternative are the avoidance of the restrictions and costs imposed by the proposed regulations.

Recreation-Tourism, Research and Education and Passive Economic Use

The lack of protections offered by the proposed discharge, submerged lands alteration and introduced species regulations would result in moderate costs (opportunity costs or lost benefits) to the recreation-tourism industry, while resulting in negligible savings in costs of compliance with the proposed regulations in other alternatives. MPWC operation in the proposed expansion area would continue, unrestricted to zones. Recreational boaters would not be subject to sanctuary discharge regulations in the expansion area, but recreational boaters in the existing sanctuary area would not benefit from the proposed action exception for clean graywater discharges.

Land Use and Development

These uses would avoid the negligible costs of complying with new regulations required under the proposed action (benefits of the No Action alternative to these uses). There would be some expected losses (opportunity costs) from the lost opportunities afforded by increased protections under other alternatives. Both costs and benefits would be negligible and less than significant.

Research and Education

The No Action alternative would result in the lost opportunities of the benefits that would accrue from research and educational activities associated with the other alternatives. The lost benefits (opportunity costs) are expected to be moderate but less than significant. The benefits of the No Action alternative would be any savings in costs associated with research and education activities, which are expected to be negligible and less than significant.

Passive Economic Use

The lack of protections offered by the proposed action would potentially result in losses in passive economic use values in the No Action alternative.

Existing Regulations Alternative***Recreation and Tourism***

Impacts would be similar to beneficial impacts described for the proposed action. The prohibition of MPWC use throughout the expansion area may cause an adverse impact on recreation and tourism compared to existing conditions, but the overall effect of the various resource protection regulations and educational programs would result in beneficial effects. On the cost side, the impacts of the regulations would also be similar to the proposed action with generally negligible costs.

The primary difference between the proposed action and this alternative, with regard to recreation, is that MPWC use would be prohibited throughout GFNMS. The only exception for MPWC use would be for emergency search and rescue missions or law enforcement operations (other than routine training activities) carried out by the National Park Service, USCG, Fire or Police Departments or other federal, State or local jurisdictions. While this may be a benefit for recreational uses such as wildlife viewing and kayaking, prohibition of MPWC use would affect the expansion area, where MPWC use is currently allowed. MPWC use is prohibited within the existing GFNMS boundaries so no new impact would occur within the existing GFNMS. Given the level of MPWC use in the expansion area, this impact is considered less than significant.

Land Use and Development

Impacts on land use and development related to discharge and submerged lands alteration would be similar to potential effects described for the proposed action. However, there would be no authorization mechanism to allow activities that involved discharges or construction on submerged lands. Approval of these uses would be limited to certification of existing permitted uses (e.g. offshore cables, moorings) at the time the sanctuary is expanded, or issuance of a sanctuary permit for a new or expanded use, if the use or activity met one or more of the criteria for issuing a permit. National marine sanctuary permits are limited to allow activities that: further research or monitoring related to sanctuary resources and qualities; further the educational value the sanctuary; further salvage or recovery operations in or near the sanctuary; or assist in managing the sanctuary. Although there are no currently planned uses that would be prohibited by existing sanctuary regulations, this is considered to be an adverse impact.

Another difference between this alternative and the proposed action for land use is that instead of establishing the two SWPZs in the expansion area and restricting low flights over these zones, the four existing ASBS in the expansion area would serve as overflight restriction zones, as shown in Figure 3.4-1. In the existing GFNMS, flights would be restricted, as they are currently are, over the Farallon Islands and the existing ASBS. There would be no establishment of SWPZs. Therefore, no impact on flights would occur in the existing sanctuary and minor adverse impacts on flight patterns would occur in the expansion area due to the introduction of flight restrictions over the four ASBS along the coast. As with the proposed action, these restricted areas are relatively small and would not substantially alter flight patterns in the area. The impact is minor and less than significant.

Research and Education and Passive Economic Use

There are no differences between this alternative and the proposed action with regard to recreation, education and passive economic use.

Arena Cove Boundary Alternative

Any development or recreational uses within the inner cove would be subject to the sanctuary regulations — either regulations outlined for the proposed action or regulations for the existing GFNMS. If this alternative was implemented with the proposed action regulations, the several existing moorings in the cove would be subject to permits or authorization and other facilities such as docks or piers would require permits or authorizations as well, as described for the proposed action. Recreational uses such as fireworks, which would be a prohibited discharge into the sanctuary, could be allowed through the authorization process; fireworks displays may also be eligible for special use permits. Also, recreational vessels would not be allowed to discharge in the inner cove other than the discharges allowed in the proposed action regulations. If this alternative was implemented with the existing regulations, prohibited activities would be just that — there would be no regulation establishing the authorization process to allow certain otherwise prohibited uses, unless the use was eligible for a special use permit. Given the limited amount of development in Arena Cove, implementation of this boundary alternative is considered a less than significant adverse impact on land use and development and recreation-tourism uses in the cove. No differences in impacts on education and research, or passive use would occur under this alternative.

MPWC Zones Alternative

The differences in this alternative with regard to socioeconomic resources relates only to recreational use of MPWC. Under this alternative, the proposed MPWC zones would be slightly adjusted. The minor differences in the designated MPWC zones would not change the findings of the impact analysis for the proposed action.

4.7 Offshore Energy

This section addresses offshore energy development, including oil and gas exploration and energy producing facilities, and alternative energy producing facilities.

4.7.1 Regional Overview of Affected Environment

The study area for this topic includes the proposed sanctuary expansion area, as well as the existing CBNMS and GFNMS. At present, there are no existing, planned or reasonably foreseeable offshore energy development projects within the study area.

Oil and Gas Development Potential

The federal Bureau of Ocean Energy Management (BOEM) indicates that oil and gas resources exist offshore California in the central and northern California regions. There are portions of two designated oil and gas basins within the proposed expansion area — the Point Arena basin and Bodega basin (see Figure 4.7-1). According to BOEM (BOEM 2013), about 10 percent of the Point Arena Basin and about one-third of the Bodega Basin are included in the expansion area, with the remaining portions of the Bodega Basin covered by existing sanctuaries to the south. BOEM estimates that the entire Point Arena basin contains about 2.0 billion barrels of oil and 2.1 trillion cubic feet of natural gas and the Bodega Basin contains approximately 1.4 billion barrels of oil and 1.5 trillion cubic feet of natural gas. Therefore, the amount of reserves underlying the proposed sanctuary boundaries (assuming even distribution of resources throughout the basin) would be 200 million barrels of oil and 210 billion cubic feet of natural gas in Point Arena Basin and 466 million barrels of oil and 500 billion cubic feet of natural gas in the Bodega Basin.

Offshore oil and gas development in State waters (3 miles from shore) is permanently prohibited by State legislation (see regulatory overview) so there is no potential for oil and gas facilities to occur in State waters of the proposed expansion area. Much of the U.S. Outer Continental Shelf (OCS) has seen little exploration and production of oil and gas, in fact there have been no exploration wells drilled in either of the basins within the study area of this EIS. Therefore, estimates of undiscovered technically recoverable reserves (UTRR) along the Atlantic Coast, much of the Pacific Coast, and coastal Alaska carry significant uncertainties. BOEM attempts to acquire geophysical exploration data (primarily seismic data) along these coasts, and purchases data to the degree they are available and if possible within their budget, but good data are difficult to acquire and much of the existing data are old. Typically, initial estimates of UTRR change, sometimes dramatically, as the quantity and quality of data improve as exploration progresses. Therefore, caution must be exercised when attempting to forecast future production and resulting revenues from the OCS (Marc et al 2010).

There are no current oil and gas leases in the proposed expansion area and no current plans to develop leases in this area. The oil and gas basins within the study area have not been included in recent federal leasing plans (see regulatory overview).

Alternative Energy Development

BOEM has received indications of interest in renewable energy projects on the OCS off of Washington, Oregon, and California (both deepwater wind as well as marine hydrokinetic [wave] energy); however, no lease requests have been received (BOEM 2013a) for California. The wind and wave resource data

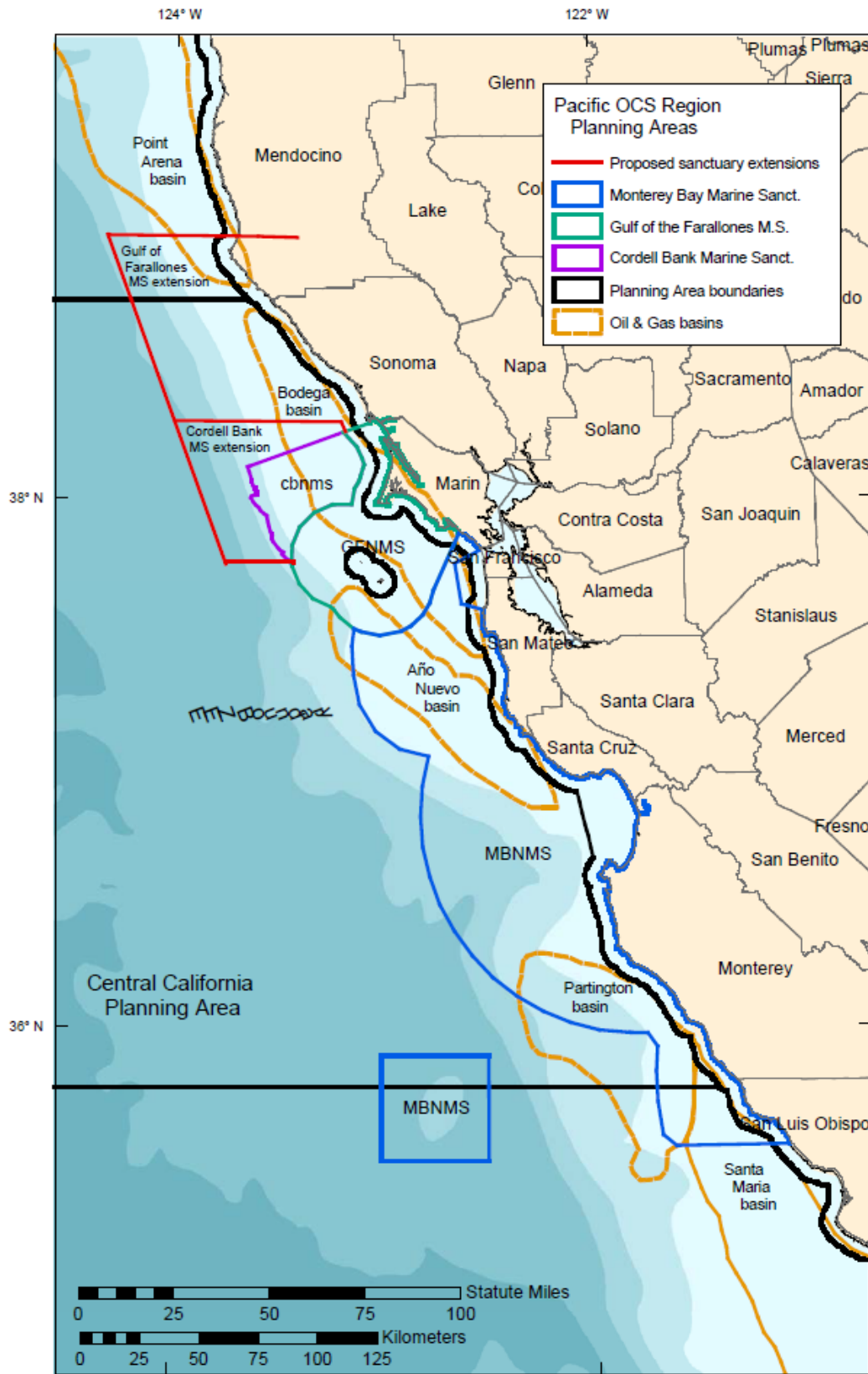


Figure 4.7 1. Oil Basins in Study Area (BOEM 2013)

provided and referenced in BOEM’s scoping comments indicate the presence of high winds and waves in the proposed expansion area, but this information does not necessarily indicate that there is strong resource development potential there. There are numerous factors affecting the siting of alternative energy development, including but not limited to availability of infrastructure, access to the resource, existing surrounding uses, shoreline and nearshore conditions and presence of sensitive natural resources.

A Sonoma County Water Agency (SCWA) staff member indicated that the Sonoma county coastline has very dense wave energy, which represents a good condition for hydrokinetic energy development (Stillman 2013). SCWA initiated a hydrokinetic feasibility study at four coastal locations in Sonoma County in 2009. The Federal Energy Regulatory Commission (FERC) granted three preliminary permits to SCWA for investigation of developing two to five megawatts (MW) of wave power at each location and to assess the potential for expansion to over 40 MW at each of the three sites. The permits were limited to studies related to determining the feasibility of wave energy; no land disturbance was authorized in the permits.

The three locations included areas of 10 to 15 sq miles along the coast north of the Russian River Estuary, each extending from one half mile to about 3 miles offshore. SCWA worked with interest groups to select these locations based on their avoidance of marine protected areas implemented under the State’s Marine Life Protection Act, known fishing and crabbing areas, and other sensitive areas. Due to funding limitations, SCWA was unable to continue the project and FERC rescinded the preliminary permits in 2011 (SCWA 2013).

4.7.2 Regulatory Overview

Offshore Oil and Gas

Offshore oil and gas development in federal waters is governed by BOEM, which is within the U.S. Department of Interior. BOEM manages offshore oil and gas leases and is responsible for administering the provisions of the OCS Lands Act regarding oil and gas development on the OCS. BOEM is authorized to prepare and implement five-year plans which identify federal waters to be opened for offshore oil and gas exploration and development. The BOEM five-year plan for 2012-2017 does not include plans for leasing tracts offshore California. Areas off the Pacific coast are not included in the 2012-2017 proposed program (BOEM 2013b), “which seeks to accommodate the recommendations of governors of coastal states and of state and local agencies — an important priority established by the OCS Lands Act. The exclusion of the Pacific Coast is consistent with state interests, as framed in an agreement that the governors of California, Washington and Oregon signed in 2006, which expressed their opposition to oil and gas development off their coasts.”

In addition to BOEM provisions, offshore oil and gas exploration, development and production facilities are subject to compliance with numerous federal laws such as (but not limited to):

- National Environmental Policy Act
- Endangered Species Act
- Coastal Zone Management Act
- Federal Water Pollution Control Act
- Ports and Water Safety Act

- Marine Mammal Protection Act
- Clean Air Act
- National Historic Preservation Act
- Oil Pollution Act and
- Federal Oil and Gas Royalty Management Act.

Offshore oil and gas development within State waters is governed by the California State Lands Commission (CSLC), which stopped leasing of new offshore tracts after the Santa Barbara oil spill in 1969. The California legislature codified the ban on new leases in 1994 when it approved the California Coastal Sanctuary Act. The California Coastal Commission and other State agencies would have regulatory authority over any proposal to lease and ultimately develop oil and gas resources within State waters. Local governments would also have regulatory authority over onshore facilities necessary and dependent on offshore oil and gas development.

Federal approval of new leases offshore California on the OCS was halted in 1982. Starting in 1990, there was a series of Presidential Executive Orders that gave these dormant leases two “red lights” followed by a “green light.” President George H.W. Bush banned new federal offshore oil leasing from 1990 to 2000, including in California. In 1998, President Bill Clinton extended this moratorium through 2012. However, in July 2008, President George W. Bush rescinded the executive order. On December 1, 2010, President Barack Obama issued an executive order banning oil leasing in the Gulf of Mexico and off both the Atlantic and Pacific coasts for five years. In summary, NOAA does not expect upcoming oil and gas development in the proposed expansion area in the foreseeable future.

Alternative Energy

There are both federal and State regulations and permitting agencies governing the development of offshore alternative energy projects.

Ocean Thermal Energy Conversion Act, 42 U.S.C. § 9101 et seq.

With regard to alternative energy sources from the ocean, the Ocean Thermal Energy Conversion (OTEC) Act of 1980 established a licensing program for facilities and plants that would convert thermal gradients in the ocean into electricity. The OTEC Act directed the Administrator of NOAA to establish a stable legal regime to foster commercial thermal energy conversion development. In addition, the OTEC Act directed the Secretary of the department in which the USCG is operating to promote safety of life and property at sea for thermal energy operations, prevent pollution of the marine environment, clean up any discharged pollutants, prevent or minimize any adverse impacts from thermal energy facility construction and operation, and ensure that the thermal plume of a plant does not unreasonably impinge on and thus degrade the thermal gradient used by any other thermal energy plant or facility, or the territorial sea or area of national resource jurisdiction of any other nation unless the Secretary of State has approved such impingement after consultation with such nation. The OTEC Act also assigned responsibilities to the Secretary of State and the Secretary of Energy regarding offshore thermal energy conversion plants. Although there are no existing large scale OTEC facilities worldwide, several pilot projects are being planned in other parts of the world (e.g. China). Tropical regions are considered the primary viable locations for OTEC plants due to the greater temperature differential between the shallow and deep water. It is

unlikely that OTEC energy development is reasonably foreseeable in the proposed sanctuary expansion area.

Energy Policy Act of 2005

The Energy Policy Act of 2005 addresses offshore renewable energy and alternative uses of outer continental shelf (OCS) oil and gas facilities. The Act amends the OCS Lands Act (OCSLA) to authorize the U.S. Department of the Interior (DOI) to act as lead federal agency for certain alternative energy and marine-related uses on the OCS; in the study area, the most likely alternative offshore energy projects covered by this Act are wind or wave generating facilities. The DOI delegated OCSLA authority to DOI's Minerals Management Service (now BOEM). The Act states that the Secretary of the Interior may grant a lease, easement, or right-of-way on the OCS for activities that: support production of energy from sources other than oil and gas; support exploration, production, storage, and transportation of oil and gas; or use OCSLA-authorized facilities for other purposes.

The Energy Policy Act of 2005 precludes BOEM from issuing leases, easements, and rights-of-way for renewable energy projects in a national marine sanctuary. BOEM's regulations essentially restate the Energy Policy Act of 2005. 30 CFR 585.204 states "BOEM may offer any appropriately platted area of the OCS, as provided in § 585.205, for a renewable energy lease, except any area within the exterior boundaries of any unit of the National Park System, National Wildlife Refuge System, National Marine Sanctuary System, or any National Monument."

While they only pertain to marine and hydrokinetic energy development (MHK),¹⁶ the BOEM/FERC Guidelines on Regulation of Marine and Hydrokinetic Energy Projects on the OCS state, "neither BOEM, through its leasing authority, nor FERC, through its licensing authority, can approve a project in a National Park or a National Monument located on the OCS. For BOEM, the same restriction applies to National Marine Sanctuaries and National Wildlife Refuges located on the OCS" (BOEM 2012). Therefore, BOEM has no authority to approve such projects within national marine sanctuaries. Depending on the individual authorization, FERC may be authorized to approve MHK licenses without a BOEM lease in national marine sanctuaries. Unless the applicant is a federal agency with congressional authorization, MHK applicants generally must have a FERC license to operate on the OCS.

Office of Renewable Energy Programs

Within BOEM, the Office of Renewable Energy Programs (OREP) oversees development of offshore renewable energy projects on the OCS. This relatively new activity in the marine environment requires an assessment of the potential environmental impacts on resources on the OCS. The Bureau's responsibilities include determining and evaluating the effects of OCS activities on natural, historical, and human resources and the appropriate monitoring and mitigating of those effects.

¹⁶ Marine and hydrokinetic energy encompasses ocean thermal energy conversion (OTEC), which falls under the jurisdiction of NOAA. However, the BOEM guidelines uses the term only as it applies to technologies under BOEM's leasing responsibility primarily referring to wave, tidal and ocean current technologies (BOEM 2012).

State Alternative Energy Regulations

Alternative energy projects in State waters would be subject to regulations and approvals established by the CSLC and California Coastal Commission, plus any onshore facilities would require approvals from local jurisdictions. In addition, offshore energy projects in State waters would likely require approval from numerous other resource and permitting agencies, including CDFW, USCG and FERC (license to tie-in to the onshore electrical transmission grid).

Recently enacted legislation (SBX2-Simitian, Chapter 1, Statutes of 2011) establishes a State policy goal of producing 33 percent of California's electrical needs with renewable energy resources by December 31, 2020. The goal applies to all electricity retailers in the state. A substantial number of renewable energy projects are required to meet this directive, as well as to achieve the State's climate change goal of reducing greenhouse gases in the atmosphere to 80 percent of 1990 levels by 2050, as set forth in Executive order #S-3-05, signed June 1, 2005 by then Governor Schwarzenegger.

CSLC staff from the Environmental Planning, Land Management, Mineral Resource Management, and Legal Divisions formed an interdivisional planning team (the "Alternative Energy Program") in December 2011 in order to more effectively coordinate Commission activities related to renewable/alternative energy projects. CSLC staff members also participate in the Ocean Protection Council's Marine Renewable Energy Working Group, which is working to solve the environmental and logistical challenges associated with development of offshore wave, tidal, and wind energy (CSLC 2012). There are no pending applications for development of offshore renewable energy at this time.

4.7.3 Impact Assessment Methodology

This section assesses potential impacts on offshore energy exploration and development. Since there is no existing or proposed energy development in the study area, the analysis includes evaluation of potential impacts on future energy development. Making significance determinations on future impacts would be speculative at this time, given uncertainties about energy resource development potential.

4.7.4 Environmental Consequences

Any alternative that involves the incorporation of the proposed expansion area within the sanctuaries' boundaries would result in a prohibition of exploration for, or development of oil, gas and mineral resources within that area, consistent with existing CBNMS and GFNMS regulations that prohibit such activities and facilities. Generally speaking, alternative energy development requiring alteration of the submerged lands or discharges in the sanctuary would not be allowed unless authorized or permitted by NOAA, subject to terms and conditions established in the sanctuary regulations.

Proposed Action

Implementation of proposed sanctuary regulations would prohibit all oil and gas exploration and development. This new prohibition would mainly apply to federal waters, as oil and gas development has been permanently banned in State waters by State legislation. There are no existing oil and gas facilities, no active leases and no plans to develop OCS oil and gas reserves. Therefore, compared to existing conditions, the proposed action would have no adverse impact.

Looking at impacts on future development potential, in total, the amount of oil and gas resources underlying the proposed expansion area, as estimated by BOEM, is slightly less than 700 million barrels of oil and 700 billion cubic feet of natural gas. This includes 0.466 billion (466 million) barrels of oil and 0.5 trillion (500 billion) cubic feet of natural gas in the Bodega Basin and about 200 million barrels of oil and 200 billion cubic feet of natural gas in Point Arena Basin. These estimates do not include portions of both basins that are located in State waters, where oil and gas development is already prohibited. Also, these estimates do not factor in technological limitations on fully extracting the entire amount of oil and gas. In addition, these assessments are based on conditional estimates and more reliable estimates of the amount and value of oil and gas resources cannot be determined until drilling occurs. The overall estimated quantity of oil and gas that would be precluded from development is not considered substantial by NOAA, compared to existing total U.S. reserves, especially given the recent projections that increased the overall amount of reserves available for future development. BOEM estimates that the total OCS UTRR are 88.59 billion barrels of oil and 398.37 trillion cubic feet of gas (BOEM 2013c). Using BOEM's estimates, the precluded area within the expanded boundaries of the sanctuaries represents 0.0079 of the total OCS oil reserves and 0.0012 of total gas reserves in the U.S. NOAA considers this loss less than significant particularly since there is no indication that these reserves would be considered for active energy production in the future.

The proposed action would eliminate the existing provision in the GFNMS regulations that allows oil and gas pipelines from oil and gas development adjacent to the sanctuary. However, there are no existing or proposed oil and gas facilities near the sanctuary. Therefore, this proposed change does not result in any adverse impact on oil and gas development.

Regarding alternative energy, it would be speculative to attempt to estimate the potential for alternative energy development, as no studies have been completed or proposals made in the expansion area. The proposed action would result in several changes in the way future alternative energy projects are permitted or authorized in the expansion area as well as the existing sanctuaries:

- As mentioned in the regulatory overview, BOEM does not have authority to approve hydrokinetic projects within national marine sanctuaries so development in federal waters of the expansion area would no longer be under the jurisdiction of BOEM.
- Although the proposed action does not contain regulations specific to alternative energy development, the proposed regulations prohibit most discharges into the sanctuary and prohibit alteration of submerged lands, consistent with existing sanctuary regulations. Alternative energy projects in the expansion area (and throughout the sanctuaries) would be subject to these regulations. However, under the proposed authorization provision, alternative energy projects involving alteration of submerged lands or prohibited discharges could be approved in both the existing sanctuaries and proposed expansion area. In that case, the potential impacts of the alternative energy project would be analyzed under NEPA in a separate public process.
- Existing CBNMS and GFNMS regulations do not have an authorization provision, so there is no mechanism at this time to allow alternative energy projects involving discharges or alteration of submerged lands within the boundaries of the existing sanctuaries. By adding the authorization provision to the regulations of both sanctuaries, more area would be available for alternative energy projects than is currently available. Therefore, the net adverse impact on alternative energy would be negligible.

As stated in the regulatory setting, any future alternative energy projects would be subject to approvals from numerous agencies, depending on location and jurisdiction. Other than the change in BOEM jurisdiction, regulatory agencies with existing authority over alternative energy projects would continue to have such authority within the sanctuaries' boundaries. Environmental protection offered by both the sanctuary regulations and resource agency regulations would continue to apply to alternative energy development.

No Action Alternative

Under the No Action alternative, offshore energy development would continue to be regulated by existing State and federal requirements. Alternative energy projects within coastal onshore areas would also be regulated by local jurisdictions. No impact on offshore energy development would result from the No Action alternative.

Existing Regulations Alternative

The regulations regarding oil and gas prohibitions would be the same as the proposed action, except that oil and gas transmission pipelines would be allowed in GFNMS under certain conditions. This would have the potential to accommodate pipelines from oil and gas facilities outside of the sanctuary boundaries. However, no oil and gas development projects exist in the ocean offshore central or northern California and none are proposed.

It is possible that alternative energy projects could obtain sanctuary permits, as described for the proposed action. Alternative energy development would be prohibited if facilities would alter the submerged lands or would have discharges or deposits of substances prohibited by sanctuary regulations. There would be no authorization provision to allow projects that alter the seabed or have discharges. Therefore, there may be an adverse impact on alternative energy development, although there are no current proposals for such facilities in the proposed expansion area.

Arena Cove Boundary Alternative

There is no difference in impacts on oil and gas development between this alternative and the proposed action. The area to be included in the sanctuary boundary under this alternative is within the jurisdiction of the State, where oil and gas development is permanently banned. There is no potential for oil and gas development to occur there. For alternative energy, if the existing regulations were applied, projects that would alter the submerged lands or would have discharges or deposits of substances would be prohibited. If the proposed action regulations were applied, the authorization process would provide a mechanism to approve such facilities. Given the small area of the cove and the presence of other harbor uses, the preclusion of alternative energy projects at this location would result in a very minor adverse impact.

MPWC Zones Alternative

This sub-alternative regards MPWC boundaries and as such, could be implemented with either the proposed action or existing regulations alternative. The impacts of regulations under these two alternatives are described above. There would be no differences in impacts regarding energy development.

4.8 Marine Transportation

This section summarizes existing marine transportation activities in the region, including commercial cargo vessels and cruise ships. Commercial fishing, recreational fishing and boating, and homeland security and military transportation are addressed separately in Sections 4.4, 4.6 and 4.9. The impact analysis presents the standards used to evaluate impacts on marine transportation and addresses potential effects of the proposed action and alternatives on vessel transportation activities. The study area for the marine transportation analysis includes the waters from Bodega Bay to Point Arena. In addition, implementation of proposed sanctuary regulations would affect vessel discharges occurring outside of the study area that flow into the expanded sanctuary area.

4.8.1 Regional Overview of Affected Environment

Since Spain first began sailing the Pacific Ocean in the 1500s, the history of the development of California's north-central coastal economy has been influenced by the maritime industry. Ocean-based commerce and industries are important to the maritime history, the modern economy, and the social character of this region.

In 2012, 7,450 vessels transited the shipping lanes into and out of San Francisco Bay (Table 4.8-1). Figure 4.8-1 depicts the designated Vessel Traffic Service (VTS) area and vessel transit patterns of the Traffic Separation Scheme (TSS) offshore of San Francisco outside San Francisco Bay. See Section 4.8.2 for additional details on the VTS.

Since the study area is located north of San Francisco Bay, the statistics for vessels transiting to the north are of particular interest for this analysis. In 2012, a total of 1,966 transits occurred in the northern traffic lane (Table 4.8-1).

Table 4.8-1. Summary of Vessel Transits in and out of San Francisco Bay

Year	IN				OUT				Grand Totals
	North	South	West	Total	North	South	West	Total	
2005 Total	1,092	1,798	1,346	4,236	1,721	1,124	1,397	4,242	8,478
2006 Total	1,118	2,086	1,371	4,575	1,901	1,276	1,407	4,584	9,159
2007 Total	1,061	2,136	1,330	4,527	1,857	1,121	1,504	4,482	9,009
2008 Total	950	2,095	1,442	4,487	1,851	1,077	1,519	4,447	8,934
2009 Total	728	1,898	1,496	4,122	1,580	702	1,823	4,105	8,227
2010 Total	687	1,634	1,743	4,064	1,088	413	2,404	3,905	7,969
2011 Total	646	1504	1925	4055	1032	370	2492	3894	7,949
2012 Total	701	1364	1700	3765	1265	400	2020	3685	7450
Grand Total	6983	14515	12353	33831	12295	6483	14566	33344	67175

Source: USCG unpublished data, Automatic Identification System Vessel Traffic Service (USCG 2013).

California ports handled an estimated 700 cruise ship port calls in 2012. The Port of San Francisco experienced steady gains in cruise ship traffic, from 44 calls and 56,968 passengers in 1994 to 65 calls and 195,000 passengers in 2012 (SFPORT 2013). Itineraries from San Francisco include round trip cruises to Alaska and Mexico.

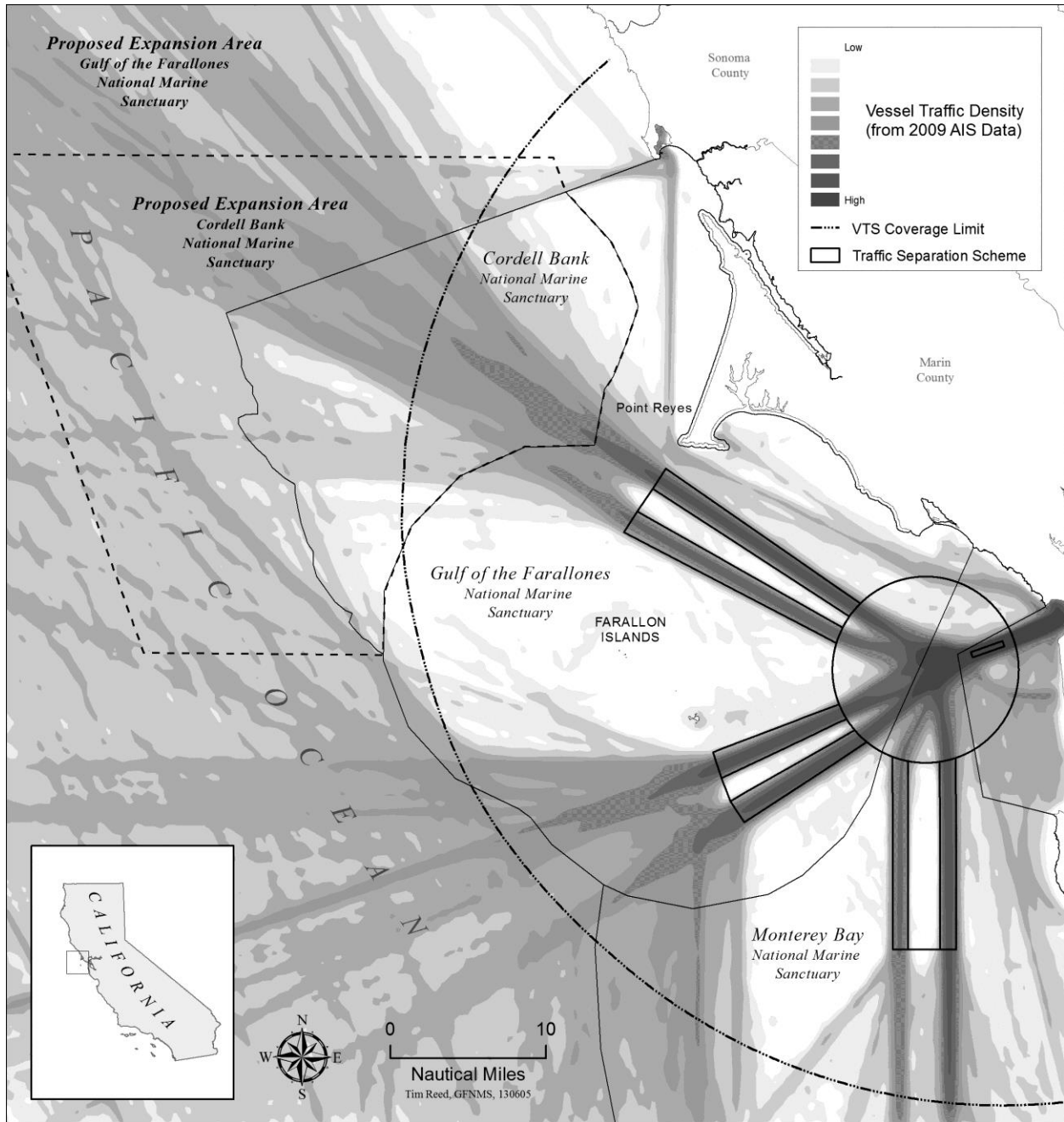


Figure 4.8-1. Marine Transportation – VTS Area

Vessel traffic patterns in and out of San Francisco Bay, including all vessels over 300 gross tons, which includes tugs, tanker ships, cruise ships, container vessels, military craft and research vessels. *Source:* USCG unpublished data, Automatic Identification System, Vessel Traffic Service (USCG 2013).

Using the Automatic Identification System (AIS) data (NAVCEN 2013), staff at the NOAA Southwest Fisheries Science Center analyzed vessel traffic density offshore of north central California for 2009, including waters of the study area. Vessel traffic density was analyzed as the number of kilometers traveled by vessels per square kilometer (km^2) block. The vessels included were cargo vessels, large passenger ships, and tankers, all greater than 328 feet (100 meters) in length. The data revealed that cargo vessels

usually travel more than 23 miles (20 nm) offshore within the study area. There were between 10 and 25 cargo vessels per km² that traveled within 11.5 miles (10 nm) of Point Arena in 2009. Large passenger vessels transited within 13.8 miles (12 nm) of shore with the vessel density being 5–15 per km². The majority of tankers transited greater than 46 miles (40 nm) from shore with a density of 8–15 vessels per km² within 15 nm from Bodega Head.



Figure 4.8-2. Large vessels such as cruise ships and cargo vessels have the potential to directly impact marine mammals. Photo: Bob Wilson.

Vessel spills are a major concern when considering potential threats to the area. The potential impacts could be enormous given the number and volume of vessels and the sensitivity of resources in the area. In addition to oil tankers, large cargo vessels are a concern because in addition to their cargo they can carry up to one million gallons of bunker fuel for vessel propulsion, a heavy, viscous fuel similar to crude oil.

In late 1984, on-board explosions about 8 miles (6.9 nm) seaward of the Golden Gate Bridge disabled the tanker *Puerto Rican*. The vessel broke apart and discharged refined oil products within the boundary of Gulf of the Farallones National Marine Sanctuary. Thousands of seabirds were oiled and died.

In November 2007, the container ship *Cosco Busan* collided with the Bay Bridge within San Francisco Bay, spilling 58,000 gallons of bunker fuel that spread throughout the Bay and into coastal waters. Oil from the spill traveled over 25 miles (21.7 nm) and reached beaches in MBNMS and GFNMS. Wildlife impacted from the spill included thousands of seabirds that were oiled and killed (Oiled Wildlife Care Network, unpublished data). There have been numerous vessel spill incidents within GFNMS since the establishment of the sanctuary. These two incidents are examples of the multiple spills that occurred across a 30--year period; they demonstrate the seriousness of the potential hazards to this area from vessel spills, including spills from accidents that occur outside sanctuary boundaries. Sunken vessels residing on the seafloor have the potential to leak oil or other contaminants into the area. The rocky mainland coast in Sonoma and Mendocino Counties has historically provided hazardous navigational obstacles to shipping. Many known shipwrecks litter the seafloor in this region; see Section 4.5 (Cultural and Maritime Heritage Resources).

In addition to the threat of materials being deposited from vessels into the sanctuary, vessels themselves can directly affect various sanctuary resources. Vessels can potentially alter the behavior of marine mammals and seabirds, changing the distribution of the animals or the amount of time that they spend feeding and/or resting. Vessels also injure or kill marine mammals through collisions. In the fall of 2007, there were at least three blue whale deaths off the coast of southern California that were attributed to ship strikes (Santa Barbara Museum of Natural History 2013). Similar suspected whale ship strikes occurred in 2010, when two blue, one humpback and two fin whales were found dead off the coast of northern California.

4.8.2 Regulatory Overview

Regulations that apply to vessel traffic offshore California are summarized in this section. Additional regulations related to vessel discharges and marine water quality are described in Section 4.2 (Physical Resources) under Water Quality.

Federal Regulations

Several acts of Congress govern the movements of commercial vessels in specified waterways. These acts include the Ports and Waterways Safety Act of 1972, the Port and Tanker Safety Act of 1978, and the Oil Pollution Act of 1990. In addition, the U.S. Coast Guard VTS regulations became effective October 1994. The VTS San Francisco Area includes the Pacific Ocean in a 38 nm (43.7 miles) radius around Mount Tamalpais, which is 10 miles north of the Golden Gate.

Ports and Waterways Safety Act (PWSA) of 1972

The PWSA of 1972 authorizes the USCG to establish vessel traffic service/separation (VTSS) schemes for ports, harbors, and other waters subject to congested vessel traffic. The VTSS apply to commercial ships, other than fishing vessels, weighing 300 gross tons or more. The Oil Pollution Act of 1990 amended PWSA to mandate that appropriate vessels comply with VTSSs. Two categories of vessels are defined in 33 CFR 161 – VTS Users and Vessel Movement Reporting System (VMRS) Users, each with specific requirements. In 2010, the USCG initiated a Port Access Route Study on modifying the traffic lanes for the San Francisco TSS. The United Nations International Maritime Organization (IMO), subsequently adopted the USCG recommended lane modifications and amended the San Francisco TSS, effective on June, 1 2013. The modification of the lanes was done in collaboration with NOAA. The intention of this effort was to increase the safety of navigation of vessels while reducing the co-occurrence of vessels and whales, in order to reduce the incidence of whale strikes. Only a small portion of the expansion area is within the USCG VTS area as delineated by the dashed line in Figure 4.8-1.¹⁷

Port and Tanker Safety Act of 1978

The Port and Tanker Safety Act of 1978 provided broader regulatory authority over regulated and non-regulated areas. The Act improved the supervision and control of all types of vessels operating in navigable waters of the U.S., and improved the safety of foreign or domestic tankers that transport or transfer oil or hazardous cargoes in ports or places subject to U.S. jurisdiction.

Oil Pollution Act of 1990

The Oil Pollution Act of 1990 established that parties responsible for discharging oil from a vessel or facility are liable for: (1) certain specified damages resulting from the discharged oil; and (2) removal costs incurred in a manner consistent with the National Contingency Plan (NCP). The liability for tankers larger than 3,000 gross tons was increased to \$1,200 per gross ton or \$10 million, whichever is greater. The fine for failing to notify the appropriate Federal agency of a discharge was increased from a maximum of \$10,000 to a maximum of \$250,000 for an individual or \$500,000 for an organization, and the maximum

¹⁷ The USCG VTS has an official area of jurisdiction that extends 38 nm in an arc around the Mt. Tamalpais transmission station. However, USCG can often transmit to a much larger distance so they will communicate with vessels that are in the expansion area, but vessels are not required to check in with VTS until they enter the 38-nm line.

prison term was increased from one year to five years. Civil penalties were authorized at \$25,000 for each day of violation or \$1,000 per barrel of oil discharged, and failure to comply with a Federal removal order can result in civil penalties of up to \$25,000 for each day of violation (USEPA 2005).

State Regulations

California Ocean-Going Fuel Regulation

The California Air Resources Board (CARB) Ocean-Going Vessel (OGV) Fuel regulation is aimed at reducing emissions from ocean going vessels by requiring low-sulfur fuels to be used within 24 nm (about 28 miles) of the California coastline. As a result of this rule, the relative volume of vessel traffic has moved farther offshore and has resulted in a higher percentage of vessels now using the western approach to San Francisco. The U.S. Environmental Protection Agency Emissions Control Area (ECA) amendment to MARPOL Annex VI fuel consumption will overtake the California OGV Fuel regulation in 2015 (see http://www.arb.ca.gov/ports/marinevess/documents/marinenote2012_1.pdf and <http://www.epa.gov/OMS/oceanvessels.htm>). Although other factors may influence traffic patterns, expectations are that vessel traffic in 2015 will return to historic patterns similar to those observed prior to the introduction of the CARB rule, resulting in relatively even distribution among the three lanes.

4.8.3 Impact Assessment Methodology

The proposed action would result in a significant impact on marine transportation if its implementation would result in any of the following:

- Spillage of oil or other hazardous materials into the waters of the study area;
- Displacement of vessels in harbors within the study area; or
- Substantial delay of commercial vessel traffic.

The analysis includes an assessment of commercial shipping, which includes both domestic and foreign passenger vessels, such as cruise ships, dry cargo freighters, and tankers.

Data for the above were obtained from NOAA, California Department of Boating and Waterways, and other government agencies.

In the following analysis, the use of the terms “nautical miles” and “miles” depends on the jurisdiction and regulatory authority. Some regulations refer to nautical miles, while other regulations simply refer to miles, which is assumed to be statute miles. The same applies to the use of the terms “gross registered tons” and “gross tons” because the existing regulations vary in their references.

4.8.4 Environmental Consequences

None of the alternatives would result in significant impacts on marine transportation, as documented in the following subsections.

Proposed Action

The specific relevant proposed action regulatory prohibitions that have the potential to affect marine transportation in the sanctuary expansion area relate to discharge or deposit of matter or materials within the sanctuaries and from beyond the boundary of the sanctuaries (when subsequently, a sanctuary resource or quality is injured), introduction or release of introduced species, operation of any vessel engaged in the trade of carrying cargo within an area extending one nm from a designated Special Wildlife Protection Zone (SWPZ), desertion of a vessel aground, at anchor, or adrift and leaving harmful matter on deserted vessels in GFNMS; and abandoning any structure, matter or material on the submerged lands of CBNMS and GFNMS. However, the effects on marine transportation operations would be minor and less than significant. The proposed action would not result in any increased risk of spillage of oil or other hazardous materials, displacement of vessels in harbors, or delay of commercial traffic.

Discharge Regulations

The proposed regulations prohibiting discharges of matter and material into the expansion area would result in a minor adverse impact on marine transportation. Current State and federal regulations limit different types of discharges into the waters of the expansion area so the addition of the sanctuary regulations represents an incremental increase in restrictions on vessel discharges. Discharge regulations affect sewage and other materials associated with vessel operations.

Excluding cruise ships, it is prohibited in CBNMS and GFNMS and would be prohibited in the expansion area to discharge or deposit any matter or material from vessels within or into sanctuary waters. The exceptions to this prohibition are:

- Fish, fish parts, chumming materials or bait used in lawful fishing activities;
- Clean effluent generated incidental to vessel use by an operable, approved Type I or II marine sanitation device (MSD) (applies to vessels less than 300 gross registered tons (GRT) or vessels 300 GRT or greater without sufficient capacity to hold sewage while in a sanctuary);
- Clean: vessel deck wash down, vessel engine cooling water, vessel generator cooling water, and bilge water;
- Anchor wash; or
- Vessel engine or generator exhaust.

In addition, the proposed action includes a regulatory change for both CBNMS and GFNMS, to add an exception to the existing discharge prohibition to allow discharge of clean graywater, as defined by section 312 of the Clean Water Act (CWA) (galley, bath, and shower water), from vessels less than 300 GRT and from vessels 300 GRT or greater without sufficient capacity to hold graywater within the sanctuaries.

Cruise ships are currently prohibited by sanctuary regulations from discharging or depositing material or matter in CBNMS and GFNMS and the same prohibition would apply to the expansion area. The exceptions for cruise ships, as listed below, are more limited than the exceptions for other vessels:

- Clean: vessel engine cooling water, vessel generator cooling water, and bilge water;
- Vessel engine or generator exhaust; or
- Anchor wash.

For all vessel types, it would be prohibited in the expansion area to discharge or deposit any material or other matter that subsequently enters the sanctuaries and injures a sanctuary resource or quality. The above-described exceptions for discharges of matter or material also apply to this prohibition. The following discussion summarizes existing regulations applicable to the expansion area and implications of the proposed discharge regulations.

Sewage

Currently, in the expansion area, as described in Section 4.2 (Physical Resources), the USEPA established a No Discharge Zone (NDZ) for marine waters within 3 miles of the coastline (the territorial sea, as defined in the CWA), prohibiting discharge of treated and untreated sewage from: all large passenger vessels of 300 gross tons or greater and large oceangoing vessels of 300 gross tons or greater with available holding tank capacity or containing sewage generated while the vessel was outside of State waters (USEPA 2012). Section 312 of the CWA (33 U.S.C. § 1322) requires the use of MSDs for all vessels within 3 miles of the coast if equipped with an installed toilet. Vessels 65 feet (20 meters) and under may use a Type I, II, or III MSD. Vessels over 65 feet in length must have a Type II or Type III MSD. Smaller vessels may have MSDs (but are not required to), or may have portable toilets, portable sewage receptacles, or no toilet facilities. Beyond 3 miles from the coast, under current federal regulations, vessels may discharge treated or untreated sewage from any type of MSD. Discharge of untreated sewage throughout the sanctuaries would be prohibited under the regulations of the proposed action.

Implementation of the proposed action would mean, excepting cruise ships, vessels transiting sanctuary waters beyond 3 miles of the coastline with installed toilets could discharge clean effluent (sewage) generated incidental to vessel use by a Type I or Type II MSD, or hold the waste in a Type III MSD (required for vessels 300 GRT and above with capacity to hold the waste). The combination of the proposed action regulation and existing law (see above) would mean that vessels over 65 feet could only discharge through a Type II MSD. Vessel operators would be required to lock all MSDs in a manner that prevents discharge or deposit of untreated sewage. Cruise ships would be prohibited from discharging sewage in the expansion area without exception. In addition to sanctuary regulations, discharges within 3 miles of shore would be restricted by existing federal regulations (described above). Aside from discharge of sewage outside sanctuary boundaries, discharge into a mobile or shore pumpout or other on-shore sewage disposal facility would be an option for the waste from smaller vessels, when the facilities have the capacity to accept their volume of waste; typically pumpout services cannot serve large vessels due to their size and limited pumpout equipment and tank capacities. Should a vessel owner or operator choose to install an MSD, there would be one-time costs for purchase of the device and installation, and periodic costs for maintenance. Should a pumpout facility be used, there could be a cost each time to pump sewage from the vessel. Due to these factors, the proposed action has the potential to cause some adverse socioeconomic effects. While it is not possible due to lack of data to estimate the number of vessels engaged in marine transportation that would choose to engage in these options, the number is expected to be limited because the majority of vessels engaging in marine transportation in the expansion area already

have installed toilets and MSDs. Therefore, the proposed action is expected to result in a minor, less than significant impact on the marine transportation industry.

For vessels that would hold the waste while in the expansion area, transit time in the area would be a factor. Cruise ships and other large commercial vessels would already be expending the fuel necessary to travel through the expansion area on the way to their destinations outside it. Under normal circumstances, they would incur no additional fuel costs, would move through the expansion area in a few hours, and would have the capacity to hold sewage during that time. Smaller vessels spending time in the area rather than transiting through it, including vessels engaged in research, would either discharge waste through an approved Type I or II MSD, or hold the waste, so little impact is expected on that type of vessel. Vessels travelling through existing national marine sanctuaries off the coast of California as well as through the expansion area would either hold their waste for the incremental amount of time it would take to transit the expansion area, or would discharge the waste in allowed areas outside of national marine sanctuary boundaries. Overall, the impact on marine transportation from the prohibitions on sewage discharge is expected to be less than significant.

Other Material

The proposed discharge regulations would affect vessel discharge of other matter in the expansion area, including, but not limited to, graywater, bilge water, and solid waste.

Graywater is a category of discharge covered by a Vessel General Permit (VGP),¹⁸ which applies only to the territorial sea (3 miles from shore) within the expansion area. “Large passenger vessel and cruise ship graywater discharges are prohibited in State waters” under the VGP, and graywater discharges (including graywater mixed with sewage) from oceangoing vessels of 300 gross tons with sufficient holding capacity are prohibited in State waters.¹⁹ Vessels greater than 400 gross tons with sufficient holding capacity may not currently discharge graywater within one nm from shore when they regularly travel farther than that from shore unless they meet treatment standards and other requirements of the VGP. Vessels that do not regularly travel more than one nm from shore are required to minimize discharge of graywater. In addition,

¹⁸ Effective December 19, 2013, the existing NPDES VGP, administered by the USEPA, will be reissued and will replace the former VGP. As of that date, all vessels (except recreational vessels and vessels of the Armed Forces of the U.S.) are eligible for coverage under the VGP. Waters of the U.S. are subject to the VGP and include the territorial seas as defined in the CWA section 502(8) — the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of 3 miles. The types of vessels covered under the VGP include commercial fishing vessels, cruise ships, ferries, barges, mobile offshore drilling units, oil tankers or petroleum tankers, bulk carriers, cargo ships, container ships, other cargo freighters, refrigerant ships, research vessels, emergency response vessels, including firefighting and police vessels, and any other vessels operating in a capacity as a means of transportation. Effluent streams eligible for coverage under the VGP: deck washdown and runoff, bilge water, ballast water, and numerous other specific effluents. As of December 8, 2011, a small Vessel General Permit (sVGP) has been proposed by the USEPA (but not finalized as of August 2013), to cover all vessels (except recreational and armed forces vessels) less than 79 feet in length.

¹⁹ This is one of the several California-specific VGP requirements; for these vessels, any co-mingling of black water (sewage) and graywater waste streams are considered graywater. Another California-specific VGP requirement is “Vessel discharges shall comply with all requirements and discharge prohibitions set forth in the California Clean Coast Act of 2005 (Auth. Pub. Resources Code, § 72400 et seq. This condition cannot be made less stringent without violating the requirements of State law, including water quality standards.).

vessels with a VGP may not discharge graywater within the portion of a national marine sanctuary where the VGP applies (within 3 miles of the shore). There are other State-specific VGP requirements; the California requirements are described in Section 6.4 of the VGP.

The proposed regulation would prohibit cruise ships from discharging all graywater. It would also prohibit discharge of graywater that does not meet the definition of clean from vessels less than 300 GRT and from vessels 300 GRT or greater without sufficient capacity to hold graywater in the proposed expansion area. Since many vessels enter and exit the San Francisco Bay, allowing discharge of clean graywater in CBNMS and GFNMS would avoid the potential for a large number of vessels entering or exiting the bay to have to concentrate their graywater discharges in the small area where it would be allowed outside of MBNMS boundaries per VGP requirements.²⁰ Some vessels might still discharge in that area, but would have the other options as provided by the regulatory exception for clean graywater.

Cruise ships and other large commercial vessels would already be expending the fuel necessary to transit the expansion area within a few hours, and would have the capacity to hold the prohibited graywater during that time or discharge it according to the standards. For smaller marine transportation vessels, clean graywater could be discharged in the expansion area or their holding tank capacity could be upgraded so that non-clean graywater could be held until discharge could be made outside sanctuary boundaries or into a pumpout or other wastewater reception facility. Should a vessel owner or operator choose to upgrade holding capacity, there would be one-time costs for purchase of the equipment and installation, and periodic costs for maintenance. Should a reception facility be used, there would be a cost each time to pump the graywater from the vessel. Due to these factors, the proposed action has the potential to have some adverse socioeconomic effects on vessel operations. It is not possible due to lack of data to estimate the number of vessels engaged in marine transportation that would choose to engage in the equipment upgrade or reception facility options, but since most large vessels transiting the expansion area already have holding tanks installed, the proposed action is expected to result in a minor, less than significant impact on the marine transportation industry.

As per the Oil Pollution Act, the CWA and USCG regulations, bilge water may not currently be discharged by vessels in the expansion area when the bilge water has an oil content greater than 15 parts per million and the vessel is within 12 nm (14 miles) of land; or bilge water has an oil content greater than 100 ppm and the vessel is beyond 12 nm of land. Cruise ships and other ships of 300 gross tons or more may not release oily bilge water within State waters.

The proposed regulations would prohibit cruise ships from discharging bilge water in the expansion area, and would allow clean bilge water discharge from other vessels in the expansion area. While data are not available on the amount and types of bilge water currently discharged in the expansion area, it is not expected that the impact of the proposed regulation would be significant. Vessel owners and operators already comply with the regulatory regime for discharging pollutants and strive to maintain clean bilge water; it is expected they could refrain from discharging any non-clean bilge water and that cruise ships could refrain from discharging any bilge water while in the expansion area.

²⁰ This area is sometimes called the “exclusion area” or “donut hole”, since it is not currently a part of MBNMS.

Solid waste is another type of discharge from vessels that occurs in the expansion area. Discharge of plastics in the expansion area is currently prohibited, so there would be no additional impact on the marine transportation industry from the proposed regulations regarding plastic discharge. Under the Act to Prevent Pollution from Ships as modified by MARPOL 73/78, vessels may currently discharge garbage ground to pieces under an inch in the proposed expansion area beyond 3 nm from land and unground garbage beyond 12 nm from land.

The proposed regulations would prohibit these discharges throughout the expansion area. Vessels would be required to store food and other waste generated while transiting through the expansion area. The amount of waste generated by commercial vessels other than cruise ships is small in volume, and cruise ships have on-board equipment that reduce the volume of food waste so it may be more easily stored. The amount of food waste generated by marine transportation vessels during transit of the expansion area would likely not impact the ability of the vessels to store it and discharge it once outside the sanctuary, beyond 3 nm from shore (ground garbage) or 12 nm from shore (unground garbage). Vessel owners could take measures to reduce on-board waste streams or upgrade storage facilities if additional capacity was needed, which could involve changes to vessel waste generation practices, one-time equipment purchase costs, and maintenance costs. These factors have the potential to cause some adverse effects on vessel owners or operators, impossible to estimate due to lack of data, but since most large vessels transiting the expansion area already have some waste storage capacity, the proposed action is expected to result in a minor, less than significant impact on the marine transportation industry.

Vessels travelling through existing national marine sanctuaries off the coast of California and the expansion area would hold graywater, bilge water, solid wastes and other types of prohibited materials for the incremental amount of time it would take to transit the expansion area, upgrade waste holding facilities, change waste generation practices or discharge the materials where allowed by the regulatory regime. Overall, though there is some potential for adverse socioeconomic effects related to changing waste management equipment or practices, the impacts on marine transportation regarding discharges or deposits of matter or materials are expected to be less than significant.

Introduced Species Regulations

As described in the water quality regulatory setting in Section 4.2.2, the ballast water management regime in inland and offshore waters of California is managed by the CSLC, the USCG, and the USEPA. Ballast water may contain introduced species. In all waters of the expansion area, vessels currently have the option to retain all ballast water on board or take up or exchange/discharge ballast water if in compliance with the ballast water management regime for this region.

Within the expansion area, besides the option of retaining ballast water, vessel operators may currently follow USCG and CSLC regulations and policies regarding ballast water, which extend up to 200 nm from the land in the Pacific Coast Region. According to the CSLC's Marine Invasive Species Program, ballast water management applies to vessels over 300 gross registered tons capable of carrying ballast water. They may use an environmentally sound method of ballast water management approved before the vessel begins the voyage, by the CSLC or USCG as being at least as effective in removing or killing nonindigenous species using mid-ocean waters. Ballast water taken on within the Pacific Coast Region may also be exchanged in near-coastal waters (waters more than 50 nm from land and at least 657 feet

[200 m] deep) or may discharge it at the same port or place (within one nm of the berth or breakwater) where the ballast water originated. Vessels arriving from outside the Pacific Coast Region may also discharge ballast water at the same location it was taken on if not mixed with ballast water taken on in an area other than mid-ocean waters. In extraordinary circumstances, where compliance with approved options is not practicable, ballast water may be exchanged within an area agreed to by the CSLC in consultation with the USCG. The CSLC advises that owners, operators and persons in charge of vessels must follow best management practices to minimize the release of nonindigenous species into waters of the State, including minimizing discharge and uptake in marine sanctuaries. The other ballast water discharge option allowed by the CSLC and USCG are not applicable to the expansion area: discharge it to an approved reception facility (none approved in California); and, for vessels arriving from a port outside the Pacific Coast Region, exchange it more than 200 nm from land in waters and at least 6,562 feet (2,000 m) deep (outside the expansion area).

Ballast water discharge would be prohibited in the expansion area (as well as the existing sanctuaries, as it is currently prohibited). As part of the proposed action, vessels would have to retain ballast water until outside sanctuary boundaries. NOAA regulations prohibit releasing introduced species (with exception of a few species as described in the regulations) and prohibit discharging ballast water into CBNMS and GFNMS waters. The prohibitions do not apply to activities necessary to respond to an emergency threatening life, property, or the environment, so the proposed action would not prevent vessels from discharging ballast water in such an emergency. In addition, the VGP has a provision regarding avoiding ballast water uptake and discharge into national marine sanctuaries; it would apply to all vessels (except recreational vessels and vessels of the Armed Forces of the U.S.) equipped with ballast water tanks in waters subject to VGP.

Prohibiting the discharge of introduced species via ballast water in the proposed expansion area does not represent a substantial operational change for ballast water management because most vessels subject to ballast water regulations already normally discharge ballast water outside the expansion area. As described above, vessels arriving to a California port from within the Pacific Coast Region and transiting the expansion area would be required to retain ballast water or exchange it in waters more than 50 nm from land, which is outside the expansion area. Vessels arriving to a California port from outside the Pacific Coast Region and transiting the expansion area would retain ballast water, exchange it more than 200 nm from land, or discharge it at the California port, place or berth where the ballast water was loaded. Vessels arriving from both areas may also use an alternative, environmentally sound CSLC or USCG approved ballast water treatment method. Some vessels coming into San Francisco Bay ports are known to discharge ballast water within the territorial waters of the San Francisco-Pacific Expansion Area. Because the expansion area is not an area where ballast water uptake, exchange, or discharge normally occurs, the impact on vessel operations to prevent introduction of introduced species via ballast water discharge would be minor and less than significant.

Cargo Vessels Regulation

As part of the proposed action, in GFNMS, vessels carrying cargo would not be able to operate within one nm from any designated Special Wildlife Protection Zone (SWPZ) (proposed cargo vessel prohibition zones are depicted in Figure 3.2-10). This prohibition would not apply to vessels transporting people or supplies to the Farallon Islands or mainland areas adjacent to GFNMS and would not limit access to

fishing, recreational, or research vessels. Within the proposed expansion area, there would be two cargo vessel prohibition zones along the shoreline, and within the existing GFNMS, there would be five cargo vessel prohibition zones, all along mainland or island shorelines.

Proposed SWPZs 3 through 7 within the existing sanctuary boundaries would completely or partially overlap existing ASBS boundaries where the current GFNMS regulations prohibit cargo vessels within 2 nm. The two proposed SWPZs in the expansion area are on the coast near Fort Ross and Gualala (SWPZs 1 and 2 in Figure 3.2-10).

Cargo vessels do not typically frequent the areas around the proposed SWPZs since the areas are adjacent to shorelines that are not close to any cargo delivery or pick up ports. Under existing GFNMS regulations, these vessels are already prohibited from operating within one nm from the Farallon Islands, Bolinas Lagoon, and ASBS within GFNMS, which are generally the same areas as the five proposed SWPZs. Except when transiting to and from scheduled ports of call, cargo vessel operations almost always occur well offshore to avoid risks of accidents or groundings that might result in damage to the vessel, other vessels or facilities, or marine resources. Proposed SWPZ 1 and SWPZ 2 are proposed to be larger than the other proposed SWPZs due to the value of those coastlines for wildlife, particularly seabirds and marine mammals. Cargo vessels typically do not operate in or near the proposed SWPZs and ASBS, so there would be less than significant impacts from the proposed action on cargo vessel operations or traffic patterns.

Deserted Vessels Regulation

It is currently illegal for abandoned vessels to “trespass” on submerged lands under the California State Lands Commission’s jurisdiction (in the expansion area, from the mean high tide to 3 nm offshore). It is also illegal to abandon barges greater than 100 gross tons on the navigable waters of the United States per the Abandoned Barge Act of 1992, but there is currently no comparable federal law for other vessels.

Under the proposed action, the GFNMS regulation prohibiting vessel desertion would mean no owner, operator, or person in charge could desert a vessel within the expansion area. Vessels could not be deserted while aground, adrift or at anchor. In addition, no harmful matter could be left aboard a grounded or deserted vessel; this could lead to a prohibited discharge or deposit of harmful material or matter from the untended vessel. Among other provisions on deserting a vessel, the GFNMS regulations state a vessel may not be left aground or adrift or be discovered to be aground or adrift without notification to the Director of the ONMS within 12 hours; the Director must also be presented with a preliminary salvage plan within 24 hours of the notification. The potential for a vessel at anchor to ground or discharge or deposit materials, when the vessel is not secured in a timely manner, is another factor for considering a vessel deserted.

There is no specific proposed prohibition against deserting a vessel or leaving harmful matter aboard a deserted vessel in CBNMS; because of the offshore nature of CBNMS there is no risk of a vessel running aground and little risk of it remaining for a lengthy period of time adrift on the surface within the boundaries of the sanctuary, since winds or currents would likely cause a vessel abandoned afloat to drift outside the sanctuary boundaries within a matter of hours. Under the proposed action, CBNMS regulations prohibiting abandoning any structure or material on the submerged lands would be extended to the expansion area. (This same regulation is proposed for GFNMS, in addition to the vessel desertion regulation.) Also, the

existing discharge prohibitions would apply to harmful matter discharged or deposited from an abandoned vessel, within the waters and on the submerged lands of both CBNMS and GFNMS.

The proposed regulations might have some minor adverse impacts on the marine transportation industry, as they would place an additional economic burden on vessel owners/responsible parties to ensure that capsized, sunken, or otherwise incapacitated vessels in the expansion area be salvaged rather than abandoned and to ensure that any hazardous substances are removed from grounded or abandoned vessels. The intent of the regulations is to ensure that vessel owners take responsibility for their vessels before damage to sanctuary resources and habitats can occur or worsen. The financial impact of fines or penalties on a responsible party found to have abandoned a vessel could be small or large, due to such factors as the nature of the deserted vessel, if it contained hazardous substances, and impacts from the vessel on sanctuary resources. It is far less expensive for vessel owners to salvage their incapacitated vessels than to pay fines, fees, costs associated with response, damage assessment, and restoration activities should a vessel ground on shore and cause damage to sanctuary resources. While this might be an immediate burden for vessel owners, the overall risk of an individual boat being abandoned is expected to be relatively small, and the impact on marine transportation as a whole is expected to be minor and less than significant.

To summarize the impacts on marine transportation from the proposed action, there might be some immediate, adverse, less than significant impacts from activities related to MSD equipment installation and maintenance and salvage. Impacts resulting from the other discharge and introduced species prohibitions in the expansion area are also expected to be less than significant. There would be little, if any, adverse impact on cargo vessel operations. Impacts on the industry as a whole from the proposed action are expected to be less than significant.

No Action Alternative

Under the No Action alternative, marine transportation would continue to be managed within the proposed expansion area as it is currently managed under federal and State laws, since there would be no expansion. In the existing GFNMS, SWPZs would not be established and the existing regulation regarding operation of cargo vessels near the Farallon Islands, Bolinas Lagoon and ASBS would remain in place. No impacts on marine transportation would occur under the No Action alternative.

Existing Regulations Alternative

The regulations on most discharges, introduced species and vessel desertion in this alternative are the same as the proposed action and would have the same effects on marine transportation as described for the proposed action. This alternative would have two differences relevant to marine transportation: graywater discharge would be prohibited from all vessels; and cargo vessels would be prohibited from operating within 2 nm of existing ASBS in the expansion area (instead of the proposed SWPZs). These differences are discussed in the following subsections.

This alternative would not result in any increased risk of spillage of oil or other hazardous materials in the expansion area, displacement of vessels in harbors, or delay of commercial traffic.

Discharge Regulations

Under the existing regulations alternative, there would be no exception for clean graywater discharges from vessels, so vessels would need to hold graywater while transiting the expansion area. For vessels with sufficient holding capacity, there would be no impact. For vessels without sufficient holding capacity, vessel owners would need to consider equipment upgrades to hold graywater until discharge could be made outside the sanctuaries or into a reception facility, which has the potential to result in adverse impacts from equipment installation and maintenance.

Most of the marine transportation vessels transiting the expansion are large vessels, and most are expected to be able to hold the graywater or travel outside sanctuary boundaries to discharge it, so the overall impact on the marine transportation industry is expected to be less than significant.

Cargo Vessel Regulation

In this alternative, the SWPZs would not be established. Therefore, rather than establishing cargo vessel restriction areas around SWPZs, the existing GFNMS regulation requiring cargo vessels to operate outside 2 nm from an ASBS, would continue in force and would be applied to the four ASBS in the GFNMS expansion area. No changes would occur to the existing configuration of cargo vessel restriction areas within the existing sanctuary boundaries. (see Figure 3.4-1 in Chapter 3, Description of Proposed Action and Alternatives). The following ASBS would be covered by the regulation: Farallon Islands, Duxbury Reef, Double Point, Point Reyes Headlands, Bird Rock, Bodega, Gerstle Cove, Del Mar Landing and Saunders Reef.

Within the expansion area, while vessels would be required to operate outside of 2 nm from the ASBS, this is expected to result in little impact on cargo vessel operations or traffic patterns since these vessels typically transit farther than 2 nm from the coastline. There would be no impact on cargo vessel operations within the existing GFNMS, and minor, less than significant impacts on cargo vessel operations due to avoiding ASBS in the expansion area.

In summary, there might be some adverse, less than significant impacts from activities related to equipment installation and maintenance for holding sewage, graywater or other prohibited wastes on vessels while in the expansion area or to discharge the wastes to a reception facility, but overall, the impact on marine transportation from this alternative would be less than significant.

Arena Cove Boundary Alternative

This boundary alternative could be implemented with either the proposed action or the existing regulations alternative. The only difference in this alternative is that all of Arena Cove would be included within the expanded GFNMS, so sanctuary regulations would apply to all of Arena Cove rather than excluding the existing pier and waters east (shoreward) of the pier. The regulation covering cargo vessel traffic near designated SWPZs (proposed action) or ASBS (existing regulations) would not apply in this area, as no SWPZs are proposed for Arena Cove and no ASBS currently exist there. This alternative would result in a less than significant impact on marine transportation, similar to the proposed action.

Including all of Arena Cove within the GFNMS boundary would mean that vessels throughout the cove would be subject to the prohibitions on discharges or deposits of materials, introduction or release of intro-



duced species, and vessel desertion. The vessels that primarily use Arena Cove are fishing and recreational vessels (see Sections 4.4 and 4.6). While historically the cove was used by commercial vessels (e.g., for timber and other goods and services), there is now little, if any, use of the cove by vessels transporting goods or engaged in research activities.

Since the additional Arena Cove area is relatively small and there is little, if any, use of the additional area by the types of vessels discussed in this section, the impacts of this alternative on marine transportation would be almost the same as for the proposed action or existing regulations alternative. Any adverse impact would be minor and less than significant for the marine transportation industry overall. This alternative would not result in any increased risk of spillage of oil or other hazardous materials in the expansion area, displacement of vessels in harbors, or delay of commercial traffic.

MPWC Zones Alternative

Compared to the proposed action, this alternative would establish slightly different boundaries for the MPWC zones. Since this alternative only affects the areas of use of MPWC, there would be no new or different impact on marine transportation beyond what was identified for the proposed action. Impacts on recreational MPWC use are addressed in Section 4.6 (Socioeconomic Resources, Human Uses, and Environmental Justice).

4.9 Homeland Security and Military Uses

This section addresses uses within the expansion area and nearby areas by the U.S. Coast Guard (USCG), part of the U.S. Department of Homeland Security (DHS), and the Army, Air Force, and Navy, part of the U.S. Department of Defense (DOD).

4.9.1 Regional Overview of Affected Environment

Homeland security and military uses in the study area include USCG missions and training; U.S. Army ammunition transportation; U.S. Air Force airlift, spacelift, defense, and training operations; and transit by and training of U.S. Navy vessels and aircraft.

DHS (USCG)

The DHS is responsible for investigation and law enforcement services for a variety of homeland security issues in nine component agencies. One of those agencies, the USCG, is the most active federal maritime law enforcement agency and military presence in the study area. It is one of the five armed forces of the United States. The USCG fulfills maritime security, safety and stewardship missions. In accordance with Commandant instructions 16004.3A (COMDTINST 2003), the USCG supports national marine sanctuary management by providing routine surveillance, and dedicated law enforcement of the national marine sanctuaries concurrently with other Coast Guard operations. USCG activities consist of:

- homeland security, nearshore search and rescue operations;
- training exercises;
- regulatory enforcement, including environmental, fishery management, pollution prevention and oil spill response serving as the federal on-scene coordinator for marine spills) and other maritime regulations;
- vessel traffic management;
- drug interdiction; and
- deepwater environment activities, which are usually located more than 50 miles (43 nm) offshore.

Of the 12 active USCG stations positioned along the California Coast within the Pacific Area Command, the stations that conduct operations in the proposed expansion area are Bodega Bay and Noyo River. One station that historically had been active in the study area, Station Arena Cove, was closed and transferred to the Navy in 1958; the Point Arena lighthouse was automated in 1977. Both facilities are now privately owned. Station Bodega Bay's area of responsibility extends about 58 miles (50 nm) offshore and along approximately 65 miles of coastline from the northern boundary of the Gualala River to the southern boundary at Point Reyes. Station Noyo River's area of responsibility is from Point Delgada to the Gualala River and up to 58 miles (50 nm) offshore. Station Bodega Bay has 47-foot Motor Life Boats and 25-foot response boats used to service their area of responsibility. Part of Coast Guard Sector San Francisco, District Eleven, Pacific Area and co-located with Station Bodega Bay is the USCG Cutter *Sockeye*. The *Sockeye* is an 87-foot Coastal Patrol Boat providing search and rescue, law enforcement, environmental protection, and homeland security functions. Crew of the *Sockeye* have an area of responsibility that stretches from Mendocino County to Point Sur and out to 230 miles (200 nm) offshore. This expansive area includes the busy San Francisco Bay and Port of Oakland (USCG 2013).

The USCG also has air stations near the study area including Air Station San Francisco located at the San Francisco International Airport. Air Station San Francisco currently operates four MH65C helicopters that provide search and rescue coverage along 300 miles of coastline from Point Conception to Fort Bragg 24 hours a day. In addition to search and rescue, the air station patrols ports, waterways and provides coastal security, protects living marine resources, and enforces federal and international laws and regulations. Air Station Sacramento, located at the north end of McClellan Air Force Base, operates 5 HH-130 Hercules Fixed-Wing Aircraft that service the study area. Coverage spans the Eastern Pacific Area including the west coast of the United States, areas west of Canada, and south along the Baja California coast. Air Station Sacramento missions include search and rescue, marine environmental protection, federal law enforcement, drug interdiction patrols, and transportation for the Pacific Strike Team, which is the USCG's oil spill prevention and containment team.

The USCG has four additional facilities that service the study area: Communications Area Master Station Pacific (CAMSPAC) at Point Reyes, the USCG Training Center (TRACEN) in Petaluma, Base Alameda on Coast Guard Island in San Francisco Bay, and Sector San Francisco services on Yerba Buena Island in San Francisco Bay. CAMSPAC delivers accurate long range and deployable communication services to the USCG, maritime public, and other government agencies. These unique capabilities are vital to safety of life at sea, national security, and commerce in the maritime domain. TRACEN Petaluma is the USCG's largest west coast training center; it is adjacent to the study area and services operation specialists that work in the region. Coast Guard Island is home to USCG District Eleven, which encompasses the states of California, Arizona, Nevada, and Utah, and includes the coastal and offshore waters out to a thousand miles and the offshore waters of Mexico and Central America down to South America. In addition to numerous facilities, the island's center operates one 378-foot long "high endurance" cutter, and three 418-foot national security cutters that service the study area. In addition to USCG enlisted and civilian employees, the USCG is assisted by members of the Coast Guard Auxiliary, a non-profit organization that assists the USCG in its missions (with the exception of military and direct law enforcement missions). There are two Coast Guard Auxiliary units (called "flotillas") in close proximity to the proposed expansion area in District Eleven, Flotilla 5-5 in Sonoma County and Flotilla 8-7 in Mendocino County (USCG 2013).

As part of its training missions, the USCG conducts air use of force, surface use of force, and search and rescue activities in the study area; weapons and pyrotechnics are a part of the training, and some vessels have limited sewage holding capacity, requiring discharge every 24 to 48 hours (Schultz 2013). Within the expansion area and the existing CBNMS and GFNMS, USCG is not currently conducting any use-of-force training (either by vessel or aircraft) or any search and rescue training activities. Proposed future training areas are within the existing GFNMS and the area excluded from MBNMS, offshore of San Francisco and northern San Mateo Counties (not currently included within national marine sanctuary boundaries) (Delaney 2013).

DOD

In addition to DHS's USCG activities, there are several DOD component agencies that conduct operations in the study area.

U.S. Army

The U.S. Army operates the Military Ocean Terminal Concord (MOTCO), a general cargo and ammunition marine terminal, distribution hub and DOD cargo customs clearance center located in the eastern San Francisco Bay Area (U.S. Army 2013a). This facility of over 6,700 acres is operated by the U.S. Army's 834th Transportation Battalion of the Army's Surface Deployment and Distribution Command. MOTCO has three ocean terminal piers (with only one currently functional); it receives ammunition by rail and highway (MilitaryBases.US [Army] 2013 and U.S. Army 2013b). MOTCO enables the DOD Operations Plan for the Pacific Rim and has the capability to serve as a strategic launch platform for the West Coast (MilitaryBases.US 2013a). While MOTCO does not operate in the study area, materials being shipped to and from MOTCO pass through it.

The U.S. Army Corps of Engineers' regulatory jurisdiction for all uses in the expansion area (not limited to military uses) is the territorial sea, extending from the coastline seaward a distance of 3 nm (33 C.F.R. 329.12). See Section 4.6.2 (Socioeconomic Resources, Human Uses, and Environmental Justice – Regulatory Overview) for a discussion of uses and activities subject to U.S. Army Corps regulations.

U.S. Air Force (USAF)

The USAF operates Travis Air Force Base (AFB) in California's Central Valley, one of the largest air mobility organizations in the USAF (MyBaseGuide.com 2013). Travis AFB serves over 127,500 (active duty and reservists, military family members, civilians, and retirees and family members (Military Bases.US 2013b). The USAF conducts practice missions over the Pacific and has acknowledged aircraft going down offshore, including an unmanned experimental aircraft X-51A Waverider that suffered control failure while attempting to fly at six times the speed of sound and crashed in the Pacific offshore of Southern California in 2012 (CBS News 2013). In addition, the proposed expansion area encompasses existing Department of Defense Operating Areas (OP AREAS) utilized by the 30th Space Wing located at Vandenberg AFB, California. The 30th Space Wing conducts spacelift operations, intercontinental ballistic missile testing, missile defense and aircraft operations. Vehicles launched from the air, over the Pacific Ocean, have historically occurred south of the expansion area; however, future mission scenarios can be envisioned where the footprint of air-launched vehicles could extend into the proposed expansion area (Cortopassi 2013). Air launches are conducted by the USAF's Pegasus Program, of which the majority are for NASA missions and approximately 10% are for commercial purposes. Between 2008 and 2012 there was one air launch. The maximum size of material that could potentially be deposited into the study area as part of an air launch is 30 feet (Cortopassi 2013a), for any dimension, width or length.

U.S. Navy

Despite the closure of Navy bases in the San Francisco Bay area, the Navy still conducts operations within or near the study area. Airspace over the study area is used by the Navy for training. The Navy's Third Fleet, home-ported in San Diego, conducts surface, air, and submarine maneuvers. The Federal Aviation Administration (FAA) has approved Special Use Airspace designations for Navy and Marine Corps flights. The Navy maintains the following two warning areas in and around the current boundaries of the CBNMS and GFNMS, including parts of the proposed expansion area.

- **Warning Area 260 (W-260):** a special-use airspace over open-ocean located off the California coast north of the San Francisco Bay area beginning approximately 81 miles (70 nm) northwest of the previous

Naval Air Station Moffett Field. The airspace extends from the ocean surface up to 60,000 feet (18,288 meters). W-260 is used for all-weather flight training, air intercepts, surface operations, air-to-surface bombing, and rocket and aerial gunnery exercises with conventional ordnance. No ordnance expenditures are authorized within 9.2 miles (8 nm) of Cordell Bank (38°01'N, 123°25'W) (Slates 2013).

- Warning Area 513 (W-513): a special-use airspace over open-ocean located off the California coast located west of the San Francisco Bay area. It is bounded to the north by W-260 and begins approximately 61 miles (55 nm) northwest of the former Naval Air Station Moffett Field. The warning area extends from the ocean bottom up to 60,000 feet (18,288 meters). W-513 is used for flight training, air intercepts, and surface operations with inert conventional ordnances (Slates 2013).

Approximately one-quarter of the United States Fleet is stationed in San Diego, including three aircraft carriers. In addition two aircraft carriers and numerous submarines and other ships are stationed in the Pacific Northwest. Surface ships and submarines routinely transit through the waters of the study area. During these transits, they engage in unit level training onboard and operate within the requirements of the Federal Water Pollution Control Act section 312 and associated federal regulations (Slates 2013). Navy activities associated with Surveillance Towed Array Sensor System Low Frequency Active (SURTASS LFA) Sonar do not currently take place in the study area, but may be planned for the study area in the future and are addressed in Section 4.9.4 (Environmental Consequences).

4.9.2 Regulatory Overview

Homeland security and military uses of the study area are subject to federal regulations such as the Clean Water Act (CWA), the Act to Prevent Pollution from Ships (APPS) and MARPOL (the International Convention for the Prevention of Pollution of Ships) 73/78, Marine Mammal Protection Act (MMPA), Endangered Species Act (ESA) and Federal Aviation Administration (FAA). See Section 4.3.2 (Biological Resources – Regulatory Overview) for information on the MMPA and ESA.

Section 4.2 (Physical Resources – Regulatory Overview) provides summary information for water quality regulations applicable to most types of vessels. Additional information applicable to USCG and military vessels is provided below.

Clean Water Act (CWA)

USCG and military vessels are included in the CWA definition of “vessels of the Armed Forces of the United States.”²¹ The Vessel General Permit (VGP) does not apply to vessels of the Armed Forces of the United States. The No Discharge Zone (NDZ) offshore of California also does not apply to homeland security and military vessels.

Section 312(n) of the CWA, added in 1996, requires the EPA and DOD to identify and evaluate discharges of Armed Forces vessels to determine which discharges require control for protection of the environment and to set standards for those discharges. While not in effect yet, EPA and DOD, in consultation with the

²¹ Section 312(a)(14) of the CWA states, “vessel of the Armed Forces” means – (A) any vessel owned or operated by the Department of Defense, other than a time or voyage chartered vessel; and (B) any vessel owned or operated by the Department of Transportation that is designated by the Secretary of the department in which the Coast Guard is operating as a vessel equivalent to a vessel described in subparagraph (A).

USCG, have been working on pollution control standards to apply to most U.S. Armed Forces vessels, called the Uniform National Discharge Standards. These will be standards for the required use of marine pollution control devices (MPCD) to control discharges incidental to the normal operation of an armed forces vessel, and will apply out to 12 nm from the coastline (USEPA 2013).

APPS and MARPOL 73/78

The U.S. Code regarding ships subject to preventive measures in APPS (33 USC Section 1902 et seq.) include exemptions for armed forces ships owned or operated by the USCG and military departments that the Secretary of the relevant department determines cannot fully comply with specified discharge requirements because compliance is not technologically feasible or would impair the ships' operations or operational capability.

The Secretary of the Navy is required to develop and support technologies and practices for solid waste management aboard ships owned or operated by the Department of the Navy, including technologies and practices for the reduction of the waste stream generated aboard such ships. APPS includes provisions for plastic collection, storage and disposal aboard Navy ships with plastic processors. There are exceptions for Navy ships for security, the safety of a ship, personnel health, and lifesaving, but otherwise, there are prohibitions for discharge of buoyant garbage or plastic from Navy submersibles, for discharge from Navy surface ships of plastic contaminated by food during the last three days before the ship enters port and for plastic except that contaminated by food during the last twenty days before the ship enters port. The President of the U.S. also has authority to make waivers of up to one year from specified requirements when in the paramount interest of the U.S.

USCG Vessel Environmental Manual

The USCG Vessel Environmental Manual (USCG 2007) describes environmental policies and procedures applicable to all USCG waterborne assets. It is intended to meet the requirement of 33 U.S.C. 1902(g), noncommercial shipping standards, for federal departments and agencies to prescribe pollution standards for their ships that ensure actions are consistent with MARPOL, so far as reasonable and practicable without impairing the operations or operational capabilities of the ships. The discharge requirements in the manual for USCG vessels are summarized as follows:

- U.S. Contiguous Zone (3-12 nm): Sewage and graywater discharge allowed.
- Designated “no discharge” zones: No discharge of bilges and oily waste.
- U.S. Internal Waters and Territorial Seas (0-3 nm) and U.S. Contiguous Zone (3-12 nm): Use of oily water separators highly discouraged. If used, report use and particulars. No sheen allowed. Discharge must be through oily water separators and oily content monitors and contain less than 15 ppm of oil. Preferred method is to pump to shore facility.
- U.S. Contiguous Zone greater than 12 nm [to 24 nm]: Discharge must be through oily water separators and oil content monitors and contain less than 15 ppm of oil.
- For all vessels except fixed or floating platforms and associated vessels —

- Plastics: Disposal prohibited.
 - Dunnage, lining and packing materials that float: Disposal prohibited less than 25 miles from nearest land and in the navigable waters of the U.S.
 - Food waste, paper, rags, glass, metal bottles, crockery and similar refuse (unground): Disposal prohibited less than 12 miles from land and in the navigable waters of the U.S. If ground to pieces less than one inch, prohibited less than 3 miles from the nearest land.
 - Mixed garbage types: When garbage is mixed with other harmful substances having different disposal or discharge requirements, the more stringent disposal restrictions shall apply.
- For fixed or floating platforms and associated vessels: Disposal of plastics, dunnage, food waste and mixed garbage types is prohibited in all waters, except for food waste ground less than an inch, for which disposal is prohibited less than 12 miles from land and in the navigable waters of the U.S.

Regulations on Vessels Owned or Operated by the DOD

The DOD publication, “Regulations on Vessels Owned or Operated by the Department of Defense” (Department of Defense 2005) implements Section 312(d) of the Clean Water Act by issuing standards for marine sanitation devices (MSDs) for DOD vessels. It also implements MARPOL 73/78, in accordance with the requirements of Section 3(g) of the APPS, by prescribing standards under DOD vessels should prevent oil pollution. The regulations also contain standards for design construction, and use of MSDs and other equipment.

The DOD directs DOD ships to adhere to the provisions of the Clean Water Act, the APPS and MARPOL and recognized international standards, with certain exemptions. For MSD use, the regulations describe exemption for vessels transiting, conducting or taking part in military operations and exercises and training, under repair, and at anchor in the navigable waters and territorial seas of the United States that are incapable of holding total vessel-generated sewage onboard. The regulations note vessels are to limit sewage discharge into U.S. navigable waters, territorial seas, and NDZs to the maximum extent practicable without endangering the health, safety, or welfare of the crew or other personnel aboard.

For oil pollution prevention, DOD ships that would need to deviate from their military characteristics, effectiveness, and system integrity in a way that was not in the interest of national security could be exempted to allow otherwise prohibited activities. Examples include discharge of oily bilge and oily waste (containing only distillate), when oily waste processing equipment is malfunctioning or the oil/water separating system is unable to be used, 50 nm or more from land, or to prevent machinery damage. Operational standards for oil pollution prevention that apply when a vessel is not exempted are described in the regulations. One example is discharges, regardless of oil content, that produce a sheen are prohibited within the territorial seas (0-3 nm) and contiguous zone (3-12 nm). Another example is DOD ships operating in the territorial seas and contiguous zone may process bilge water and discharge the effluent wastewater.

4.9.3 Impact Assessment Methodology

The proposed action would result in a significant impact on homeland security or military uses if its implementation would result in substantial restrictions on existing operations. Impacts on military and

homeland security uses were assessed based on review of existing and planned operations and how they might be affected by application of proposed sanctuary regulations in the expanded boundary area. The proposed regulations that may affect homeland security and military uses are the same as existing regulations for the two sanctuaries. Therefore, no new adverse impacts would occur in the existing sanctuaries; the focus of the analysis is on the proposed sanctuary expansion area.

4.9.4 Environmental Consequences

While the alternatives would result in some potential changes in DHS (USCG) and military operations, impacts on homeland security and military uses are expected to be less than significant, as documented in the following subsections.

Proposed Action

In the proposed sanctuary expansion area, all DOD activities essential for national defense conducted at the time expansion takes effect would be exempt from the prohibitions listed in the proposed regulations; consultation prior to sanctuary expansion would be undertaken to make this determination. In the expanded CBNMS area, additional DOD activities initiated after the effective date of expansion necessary for national defense would be exempted after consultation between the Department of Commerce and DOD; activities not necessary for national defense would be subject to the regulatory prohibitions. In GFNMS, the exemption is slightly different and considers that all activities currently carried out by the DOD within the sanctuary are essential for the national defense and, therefore, not subject to the regulatory prohibitions. The exemption of additional activities shall be determined in consultation between the DOD and the Sanctuary Superintendent, with authority delegated by the ONMS Director.

One such future potential (not existing) Navy activity is the use of Surveillance Towed Array Sensor System Low Frequency Active (SURTASS LFA) Sonar. The Navy issued a Final Supplemental Environmental Impact Statement/Supplemental Overseas Environmental Impact Statement for SURTASS LFA Sonar. The Navy currently plans to operate up to four SURTASS low frequency active sonar systems for routine training, testing and military operations in the Pacific, Atlantic and Indian Oceans, and the Mediterranean Sea. The Navy's operations could occur in the expanded area pursuant to the appropriate permits and authorizations. Navy consultation with sanctuaries would be required for SURTASS in the existing sanctuaries or proposed expansion area. After consultation, an authorization may be issued by the sanctuaries for the activity.

Activities conducted by the USCG for national defense would not be exempt under these regulations, as the USCG operates as part of DHS and the exemption is specific to DOD uses. Therefore, USCG activities may be affected in slightly different ways than DOD uses in the proposed expansion area.

A second relevant provision is included in the proposed regulations for both sanctuaries that exempts all activities necessary to respond to an emergency threatening life, property, or the environment, or as permitted by the ONMS Director (or delegated to the Sanctuary Superintendent). This proposed provision is the same as the existing regulations.

For DHS (USCG) and DOD activities that do not qualify for either of these exemptions, the specific relevant proposed regulatory prohibitions for the expansion area relate to discharge or deposit of matter or

materials within the sanctuaries and from beyond the boundary of the sanctuaries (when subsequently, a sanctuary resource or quality is injured); introduction or release of introduced species; desertion of a vessel aground, at anchor, or adrift and leaving harmful matter on deserted vessels in GFNMS; abandoning any material on the submerged lands; flying less than 1000 feet over a SWPZ, except for enforcement purposes; and MPWC use, except within four designated zones and for law enforcement and emergency search and rescue missions.

The USCG would assist NOAA in the enforcement of national marine sanctuary regulations in the expansion area, working in cooperation with other law enforcement agencies with jurisdiction over marine waters off the California coast; these include the NOAA Office of Law Enforcement and the CDFW Division of Law Enforcement. Under the NMSA, the Department of Commerce (NOAA) and DOD and USCG are required to engage in consultations prior to sanctuary designation and during instances when a federal agency's action is likely to destroy, cause the loss of, or injure sanctuary resources. Also, when findings and determinations are being made regarding a proposed sanctuary expansion, due to the fact that terms of designation are proposed to change, NOAA follows the same process set out in the NMSA for consultation prior to sanctuary designation. The Secretary of Commerce is required to consult per Section 303(B)(2) with the Secretary of Defense, and would be required to consult with the heads of interested federal agencies such as the head of the DHS.

Regarding interagency cooperation, per Section 304(d)(1)(A), in general, when federal agency actions internal or external to a national marine sanctuary, including private activities authorized by licenses, leases, or permits, that are likely to destroy, cause the loss of, or injure any sanctuary resource the actions are subject to consultation with the Secretary. Section 304(d)(1)(B) describes the responsibilities of the parties during such a consultation, including that a written statement must be provided by the federal agency proposing the action to the Secretary of Commerce. The Secretary can provide the federal agency with recommendations and alternatives to further protect sanctuary resources. Section 304(d)(1)(B) also outlines actions that may take place in cases where a recommendation by the Secretary of Commerce is not followed and a sanctuary resource is subsequently injured. As federal agencies, this section applies to DHS and DOD.

While there may be some short term adverse impacts from the proposed action, these effects would be less than significant. The proposed regulation related to prohibiting interference with enforcement actions would have the potential to result in beneficial effects. Each relevant regulation is addressed below.

Discharge Regulations

It is prohibited in CBNMS and GFNMS and would be prohibited in the expansion area to discharge or deposit any matter or material from vessels within or into the sanctuary waters. The exceptions to this prohibition are:

- Fish, fish parts, chumming materials or bait used in lawful fishing activities;
- Clean effluent generated incidental to vessel use by an operable, approved Type I or II MSD (applies to vessels less than 300 GRT or vessels 300 GRT or greater without sufficient capacity to hold sewage while in a sanctuary);

- Clean: vessel deck wash down, vessel engine cooling water, vessel generator cooling water, and bilge water;
- Anchor wash; or
- Vessel engine or generator exhaust.

In addition, the proposed action includes a regulatory change for both CBNMS and GFNMS, to add an exception to the existing discharge prohibition to allow discharge of clean graywater, as defined by Section 312 of the CWA, from vessels less than 300 GRT and from vessels 300 GRT or greater without sufficient holding capacity to hold graywater within the sanctuaries.

As described above, USCG activities would not be exempt from this discharge prohibition (unless associated with an emergency) and, if discharge into CBNMS or GFNMS could not be avoided, would be required to obtain a national marine sanctuary permit. Existing DOD activities essential for national defense would be exempt from the prohibitions. DOD activities associated with an emergency would also be exempt. Exemption of all other DOD activities in the expansion area not essential for national defense or emergencies would be subject to consultation between the DOD and Sanctuary Superintendent, with authority delegated by the ONMS Director. Such activities may be subject to national marine sanctuary permits.

Application of the regulations as part of the proposed action would result in some changes from current practices to USCG and DOD discharges in the expansion area. Other than when an exemption would be applicable (as described above), USCG and DOD vessels, aircraft and spacecraft would need to hold the prohibited discharges while in the waters or over the airspace of the expansion area. Possible examples include when the USCG is engaged in training activities or the DOD is performing a media or public event to demonstrate air or vessel capabilities. They would also need to ensure no matter or material discharged outside the expansion area subsequently entered the sanctuaries and injured a sanctuary resource or quality.

Sewage

As a result of the proposed action, sewage discharge would be limited. USCG and DOD vessels in sanctuary waters with installed toilets could discharge clean effluent (sewage) generated incidental to vessel use by a Type I or Type II MSD, or hold the waste in a Type III MSD (required for vessels 300 GRT and above with capacity to hold the waste). Little impact is expected for vessels with approved Type I and II MSDs. Vessel operators would be required to lock all MSDs in a manner that prevented discharge or deposit of untreated sewage. The majority of USCG and DOD vessels utilizing the expansion area should already have installed toilets and MSDs.

USCG and DOD vessels travelling through existing national marine sanctuaries off the coast of California as well as through the expansion area would either hold their waste (if not clean effluent) for the incremental amount of time it would take to transit the expansion area, or would discharge the waste in allowed areas outside of national marine sanctuary boundaries. The 87-foot USCG Coastal Patrol Boats have limited holding capacity, requiring discharge every 24 to 48 hours, so if they did not have a Type I or II MSD, mission plans for these vessels would need to take the vessels' holding capacity into account to ensure the vessels were outside national marine sanctuary and State waters when a discharge needed to be made.

Depending on the nature of the missions they undertake, this could potentially have an impact on USCG operations. The USCG could apply for a national marine sanctuary permit to allow the sewage discharges and avoid disruption to their missions, therefore the impact would be less than significant. Discharge into a mobile or shore pumpout facility would be an option for waste from some vessels, when the pumpouts had the capacity to accept their volume of waste. Should the USCG or a DOD agency choose to install an MSD, there would be one-time costs for purchase of the device and installation, and periodic costs for maintenance. Should a commercial pumpout facility be used rather than a USCG or DOD pumpout, there could be a cost to pump sewage from the vessel. For vessels that would hold the waste while in the expansion area, USCG and DOD vessels might be required to transit farther than they do currently until the waste could be discharged or pumped out. Due to lack of data, it is not possible to estimate the costs, but it is expected that budget allocations could be made to comply with these environmental regulations pursuant to USCG and DOD regulations and policy. In addition, if there are cases where an activity might merit a national marine sanctuary permit to allow an otherwise prohibited discharge (such as mentioned above for sewage from Coastal Patrol Boats), the agencies could consult to determine if permit issuance meets the conditions in the sanctuary regulations. For example, some USCG vessels have limited capacity to hold discharges while conducting activities beneficial to sanctuary management, such as an enforcement mission; such activities have the potential to be covered by a national marine sanctuary permit.

Due to these factors, the proposed sewage discharge regulations are expected to result in less than significant impacts on the USCG and DOD.

Other Material

The proposed regulations would prohibit USCG and military vessels and aircraft from discharging other wastes, including, but not limited to, clean graywater from vessels 300 GRT or greater with sufficient holding tank capacity and graywater from a vessel of any size that did not meet the CWA section 312 definition of clean, bilge water, and solid waste²² in all waters of the proposed expansion area. The emergency and national defense exemptions would apply to these discharges.

Currently USCG and DOD vessels are not legally subject to the VGP or NDZ, which apply within 3 miles of the coastline. USCG and DOD vessel requirements vary by discharge types and by ocean region. Some discharges currently allowed by USCG and DOD as described above in the Regulatory Overview would be prohibited in the expansion area under the proposed regulations.

USCG and military vessels 300 GRT or greater transiting the expansion area would normally have the capacity to hold graywater until out of the sanctuary, or, if they did not have the capacity to hold it, to treat it to meet the definition of clean prior to discharge. Vessels less than 300 GRT transiting the expansion area would also normally be able to either hold graywater or discharge graywater that meets the definition of clean. Clean bilge water discharge from other USCG and military vessels in the expansion area would be allowed; USCG vessel operators already generally maintain clean bilge water through the contiguous zone and follow the existing regulatory regime for discharge of oil or oily waste, when doing so does not impair operations. DOD vessel operators generally follow the regulatory regime for bilge water and oil discharge, except when doing so impedes military activities or during conditions summa-

²² Other matter would include that from aircraft, spacecraft, or space launch, not otherwise exempted.

alized in the Regulatory Overview. Food and other solid waste generated would need to be held until the vessel was in an area where the waste could be discharged according to the USCG or DOD regulatory regime. Data are not available on the amount and types of graywater, bilge water and solid waste currently discharged by USCG and DOD vessels in the expansion area, but most USCG and DOD vessels would be equipped with holding tanks. USCG and military vessels travelling through existing national marine sanctuaries off the coast of California and the expansion area would either hold graywater, bilge water, solid wastes and other types of prohibited materials for the incremental amount of time it would take to transit the expansion area, or would discharge the materials when an exemption applied. From available information on USCG and DOD aircraft and spacecraft activities, their aircraft and spacecraft currently do not regularly discharge into the expansion area (Schultz 2013; Slates 2013; and Delaney 2013), though the potential exists for a limited amount of discharged matter from airlift or aircraft training activities to be deposited in or enter into the expansion area.

Any impacts on USCG and DOD operations from application of the discharge regulations are expected to be less than significant because most USCG and DOD vessels would be able to hold prohibited wastes during the relatively short period of time they would take to transit the expansion area and aircraft/airlift operations would normally be able to avoid discharges into or entering the expansion area.

Introduced Species Regulations

Currently, vessels of the armed forces are not subject to the VGP or the CSLC ballast water management requirements. The release of introduced species by any means and discharge of ballast water would be prohibited in the expansion area; ballast water may contain introduced species. The emergency and national defense exemptions would apply to release of introduced species and ballast water discharge.

As part of the proposed action, USCG and DOD vessels would have to retain ballast water until they were able to discharge it outside sanctuary boundaries or to ballast water reception facilities, if the USCG or DOD have such facilities, unless one of the exemptions applied. The expansion area has not been documented to be an area where USCG and DOD vessels normally take up, exchange, or discharge ballast water. As such, the impact on USCG and DOD vessel operations to prevent release of introduced species via ballast water discharge would be minor and less than significant.

Deserted Vessels Regulation

It is currently illegal to abandon vessels in California State waters (from the mean high tide to 3 nm offshore). It is also illegal to abandon barges greater than 100 gross tons on the navigable waters of the United States per the Abandoned Barge Act of 1992, but there is no comparable federal law for other vessels.

The GFNMS regulation prohibiting vessel desertion would mean no USCG or military vessel could be deserted within the expansion area as part of the proposed action. In addition, no harmful matter could be left aboard a grounded or deserted USCG or military vessel; this could lead to a prohibited discharge or deposit of harmful material or matter from the untended vessel. Among other provisions on deserting a vessel, the GFNMS regulations state a vessel may not be left aground or adrift or be discovered to be aground or adrift without notification to the Director of the ONMS within 12 hours; the Director must also be presented with a preliminary salvage plan within 24 hours of the notification. The potential for a

vessel at anchor to ground or discharge or deposit materials, when the vessel is not secured in a timely manner, is another factor for considering a vessel deserted.

The CBNMS and GFNMS regulations prohibit abandoning any structure or material on the submerged lands of the sanctuaries; this prohibition would extend to the expansion area. While there is no specific CBNMS prohibition against deserting a USCG or military vessel or leaving harmful matter aboard a deserted USCG or military vessel, the existing discharge prohibitions would apply to harmful matter discharged or deposited from an abandoned USCG or military vessel on submerged lands of CBNMS.

The emergency and national defense exemptions would apply to vessel desertion and abandonment on submerged lands in the expansion area.

There is little likelihood of USCG or military vessels being purposely deserted within the expansion area, unless due to an emergency or a reason essential to DOD for national security. USCG and DOD vessels are valuable government assets and the agencies would be required to be accountable for them. Under the proposed regulations, the agencies would need to ensure their capsized, sunken, or otherwise incapacitated vessels in the expansion area be salvaged rather than deserted and that any hazardous substances were removed from grounded or deserted vessels. In such cases where deserting the vessel would occur due to an emergency, the Director would have to be informed and consultation regarding how to proceed would occur. While complying with these regulations might result in a temporary, adverse impact on the USCG or DOD, the agencies would retain their assets and would minimize environmental damage within the national marine sanctuaries.

The impact on homeland security and military uses as a whole from the desertion prohibitions would be less than significant.

SWPZ Overflight Prohibition

Currently, in the proposed expansion area, USCG and DOD aircraft may fly over all areas without restriction, except that they may not violate existing regulations, such as flying in a manner that results in take of species listed as endangered under the ESA. In the existing GFNMS, USCG and DOD aircraft may fly over all areas except less than 1000 feet over the waters within one nm of the Farallon Islands, Bolinas Lagoon, or any ASBS, except to transport people or supplies to and from the Farallon Islands or for enforcement purposes. Such activities are presumed to disturb seabirds and marine mammals.

The proposed action would change the existing GFNMS overflight prohibition over the Farallon Islands, Bolinas Lagoon or any ASBS to a prohibition on disturbing marine mammals or seabirds by flying motorized aircraft at less than 1000 feet over the waters within a designated SWPZ, except to transport persons or supplies to or from the Farallon Islands or for enforcement purposes. There would be a total of five SWPZ within current GFNMS boundaries and two SWPZ within the expansion area. As with other sanctuary regulatory prohibitions, the emergency and national security exemptions would apply.

USCG and DOD plane or helicopter flights within the expansion area that do not involve an emergency or national defense have the potential to be affected by the prohibition. In the existing GFNMS, the proposed SWPZ areas are similar to the areas where flights are currently restricted, so USCG and DOD flight patterns would be very similar to those that occur in GFNMS currently. In the expansion area, the two proposed

SWPZ are only a few miles long and it would only take minutes or seconds (depending on the air speed of the aircraft) to pass over these zones. USCG or DOD aircraft operators could choose to fly outside SWPZ boundaries or could fly more than 1000 feet over the SWPZ; either of these options would mean only minor adjustments, if any, to their flight operations in those two areas, which are not known to be areas of routine use by USCG or DOD aircraft. The most likely use would be by USCG search and rescue missions, which would be allowed through the exemption for emergency response. As such, impacts on homeland security and military aircraft operations, if any, are expected to be minor and less than significant.

MPWC Zones

In the expansion area, operation of MPWC is currently allowed; the USCG and DOD are not known to operate MPWC there. If there were future USCG and DOD activities with MPWC, they would be allowed in the four proposed MPWC zones in the expansion area. Also, the USCG would be able to operate MPWC for emergency search and rescue or law enforcement operations in all waters of the expansion area, as is currently allowed in the existing sanctuaries. MPWC used by USCG or DOD in the designated zones would be required to be equipped with a GPS units. The exemptions for emergency use and for activities essential for DOD national defense would apply to MPWC operation. Since the expansion area is not known to be an area of current or planned MPWC use by USCG or DOD and there is an exemption for law enforcement and emergency response, the impact on homeland security and military operations, if any, would be negligible.

Interference of Enforcement

Both sanctuaries include a proposed prohibition against interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of sanctuary regulations or permits. This provision has potentially beneficial impacts on homeland security, as it may improve USCG's ability to assist the sanctuaries in enforcement activities.

Summary of Proposed Action Impacts

To summarize the impacts on homeland security and military uses from the proposed action, there may be some immediate, adverse, but less than significant impacts on activities related to MSD equipment installation and maintenance, and salvage. Impacts resulting from the other prohibitions in the expansion area would be minor and less than significant.

No Action Alternative

Under the No Action alternative, homeland security and military uses would continue to be managed within the proposed expansion area as they are currently managed under federal and state laws, since there would be no expansion. No impacts on homeland security or military uses would occur under the No Action alternative.

Existing Regulations Alternative

Impacts resulting from this alternative would be similar to impacts identified for the proposed action, with only a few differences, outlined below.

The prohibition against interfering with an enforcement action would not be applied to the expansion area, thus this alternative would not achieve the benefits of this provision described for the proposed action. Without the regulation, there is the continued potential for people to interfere with USCG enforcement activities without penalty under the national marine sanctuary regulations.

There would be no exception for clean graywater discharges from vessels, so USCG and DOD vessels for which an emergency exception did not apply or in the case of the DOD, for which a national security exception would not apply, would need to hold all graywater while transiting the expansion area. For vessels with sufficient holding capacity, there would be no impact. For vessels without sufficient holding capacity, the USCG or DOD would need to consider equipment upgrades to hold the graywater, consultation to exempt the activity, or for the USCG, to apply for a national marine sanctuary permit to allow the discharge.

Flight altitude requirements in the expanded area (including for USCG and DOD flights not necessary for national defense or emergency response) would apply over ASBS in the expansion area (rather than the proposed SWPZs), and would remain as they are currently in the existing GFNMS. The differences in the areas subject to flight restrictions would not change the impact conclusions identified for the proposed action. The impact would be minor and less than significant.

MPWC operation in the expansion area would only be allowed for emergency search and rescue missions or law enforcement activities (other than routine training) carried out by the National Park Service, USCG, fire or police departments, or other Federal, State, or local jurisdictions. As described in the proposed action, USCG and DOD do not currently use MPWC in the expansion area, but would be allowed to do so if needed for emergency response or law enforcement. Any impact on future activities would be negligible.

Other regulations relevant to USCG and DOD activities, including prohibition of discharges, introduced species, vessel desertion and abandonment on submerged lands would be the same as the proposed action and the impacts of these regulations would be less than significant, as described for the proposed action.

Arena Cove Boundary Alternative

This boundary alternative could be implemented with the proposed action or the existing regulations alternative. Sanctuary regulations in the additional area included in this alternative would apply to USCG and DOD activities.

The impacts on homeland security and military uses would be similar to those described for the proposed action or existing regulations alternative and would be less than significant. There are no known current military uses in the inner Arena Cove. While USCG plans for operations in the inner Arena Cove are not publicly available, USCG activities in that part of the cove are likely to be similar as those in the expansion area as a whole (e.g. law enforcement, search and rescue, etc.). This alternative would have no impact on military uses, and would have a similar impact on USCG uses as either the proposed action or existing regulations alternative.

MPWC Zones Alternative

The difference in this alternative, as described in Section 3.6 (Alternative MPWC Zones), is that two of the MPWC zones would have different boundaries than those described in the proposed action.



Because the alternative zones are very similar to the proposed zones, the impact on homeland security and military uses in this alternative would be similar to that described for the proposed action. The establishment of the MPWC zones would not interfere with any existing or planned homeland security or military activities. The potential impact, if any, is expected to be limited and less than significant.

4.10 Cumulative Impacts

4.10.1 Introduction

CEQ regulations implementing NEPA require that the cumulative impacts of a proposed action be assessed (40 CFR Parts 1500-1508). A cumulative impact is an “impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions” (40 CFR 1508.7, NAO 216-6). Cumulative impacts can result from individually minor but collectively significant actions taking place over time (40 CFR 1508.7). NAO 216-6 also requires that cumulative actions, when viewed with other proposed actions that have cumulatively significant impacts, should be discussed in the same impact statement. Per section 5.09(a) of NAO 216-06, impacts of subsequent specific actions by the program will be assessed in subsequent specific NEPA documents.

CEQ’s guidance for considering cumulative effects states that NEPA documents “should compare the cumulative effects of multiple actions with appropriate national, regional, state, or community goals to determine whether the total effect is significant” (CEQ 1997). This section presents the methods used to evaluate cumulative impacts, lists projects that may have cumulative effects when combined with the impacts from the proposed action or alternatives discussed in this EIS, and evaluates potential cumulative impacts.

4.10.2 Cumulative Impact Assessment Methods

CEQ’s cumulative effects guidance sets out several different methods for assessment such as checklists, modeling, forecasting, and economic impact assessment, where changes in employment, income and population are evaluated (CEQ 1997). This EIS uses a variety of methods, depending on the resource area, to determine cumulative effects. In general, past, present and future foreseeable projects are assessed by topic area. Cumulative effects may arise from single or multiple actions and may result in additive or interactive effects. Interactive effects may be countervailing, where the adverse cumulative effect is less than the sum of the individual effects, or synergistic, where the net adverse effect is greater than the sum of the individual effects (CEQ 1997). The projects in Table 4.10-1 are anticipated to occur in the reasonably foreseeable future within the study area. NOAA has considered the effects of these actions in combination with the impacts of the proposed action to determine the overall cumulative impact on the resources in the study area.

4.10.3 Past, Present and Reasonably Foreseeable Future Projects

The numerous projects that could contribute to cumulative impacts are listed in Table 4.10-1. This list was compiled from several sources. Only those projects with potential to contribute to cumulative impacts are listed. These projects are similar in scope to the proposed action, relate to marine activities, have similar types of impacts within the study area, affect similar resources or are large enough to have far-reaching effects on a resource. This approach was taken to include both projects for which detailed descriptions and expected impacts are known, as well as projects that have less defined impacts, but, as development projects, may contribute to the regional impacts.

Table 4.10-1. Projects with Potential to Contribute to Cumulative Impacts

Project	Project Location	Project Sponsor	Project Description	Projected Completion
MBNMS Expansion	San Francisco Area	NOAA ONMS	Assessment of potential expansion of MBNMS to include the existing San Francisco–Pacifica Exclusion Area, adding 101 sq miles (77 sq nm) to the sanctuary from the waters west of the Golden Gate Bridge to the current sanctuary boundaries.	2014-2015
Essential Fish Habitat (EFH) Five-Year Review	Pacific Coast	Pacific Management Council (PFMC)	PFMC is conducting a 5-year review of Pacific coast groundfish and issued on May 1, 2013 a request for proposals to modify groundfish EFH, including modifications to the boundaries of existing closed areas or the addition of new closed areas. The Council will then decide late 2013 or early 2014 whether sufficient new information exists to pursue modifying groundfish EFH, through an amendment to a fishery management plan or other appropriate process.	2014
ONMS Rulemaking	All National Marine Sanctuaries	NOAA ONMS	<p>NOAA is currently working on a proposal to reorganize the general regulations, consolidate and standardize definitions and permitting regulations, standardize boundary descriptions, and clarify NOAA’s ability to evaluate the eligibility for sites to be considered as potential national marine sanctuaries. Most of the proposed changes are technical and procedural clarifications. This proposed rule would streamline the National Marine Sanctuary regulations, effectively eliminating inconsistencies and redundancies and making the regulations more understandable to the public. The proposed regulatory changes do not alter individual sanctuary regulations in a way that would either substantively change existing uses of the sanctuary or prohibit otherwise permitted activities within the sanctuary. This rule does not prohibit any activities that are currently allowed in a sanctuary, nor does it allow an activity that is currently prohibited. This rulemaking proposes to take the following actions:</p> <ul style="list-style-type: none"> • Clarify procedures for identifying and evaluating marine sites for eligibility as national marine sanctuaries (without changing the process or standards for the actual designation). • Standardize boundary descriptions. • Consolidate and standardize definitions that are common to all sanctuaries (including modifications to definition of MPWC). • Consolidate and standardize the permitting regulations into a single subpart and make minor substantive clarifications. • Make other conforming and administrative changes such as establishing a provision to allow all national marine sanctuary sites authorization authority. 	2014

Table 4.10-1. Projects with Potential to Contribute to Cumulative Impacts

Project	Project Location	Project Sponsor	Project Description	Projected Completion
Introduced Species Rulemaking	MBNMS and State waters within GFNMS	NOAA	In 2008, ONMS released a final rule that was a result of a joint management plan review (JMPR) of the Gulf of the Farallones, Monterey Bay, and Cordell Bank national marine sanctuaries (73 FR 70488). These regulations went into effect in March 2009, and they included regulation of introduced species in the federal waters lying beyond the State waters of each sanctuary. In that final rule, NOAA changed the terms of designation for GFNMS and MBNMS to clearly allow regulation of introduced species. NOAA's regulations prohibited introduced species with exceptions for striped bass caught and released during fishing and current State-permitted mariculture activities including introduced species in GFNMS's Tomales Bay. NOAA is currently working on a proposal to alter the original terms of designations for GFNMS and MBNMS to regulate introduced species in both the State and federal waters of the sanctuaries. The regulations for the GFNMS would contain a minor modification to the wording regarding exceptions for introduced species. Also, a limited authorization provision would be added to nationwide regulations to allow introduction of non-invasive introduced species from shellfish mariculture in State waters in GFNMS. The regulations define introduced species generally as non-native species or any organism that has been genetically modified.	2014
Environmental Assessment of Field Operations in the West Coast Region Office of National Marine Sanctuaries	West Coast	NOAA	In compliance with the requirements of NEPA, ONMS is developing regional programmatic environmental assessments (PEAs) that will assess the potential impacts of sanctuary field operations on the natural and human environment. Specific field operations will be evaluated on a regional basis, taking into consideration the protected resources that may be present at each sanctuary. The PEAs will be used to engage in interagency consultation and permitting requirements under NHPA, ESA, MMPA, and EFH provisions of the MSA, as appropriate. Field operations may include vessel, aircraft, and diving operations, as well as deployment of instrumentation and presence of personnel. Through field operations, sanctuary staff may perform scientific research, collect information for educational programs, and monitor various human activities and natural phenomena in support of the NMSA's primary objective of resource conservation and individual sanctuary priorities.	2014

Table 4.10-1. Projects with Potential to Contribute to Cumulative Impacts

Project	Project Location	Project Sponsor	Project Description	Projected Completion
Vessel General Permit (VGP)	Territorial Sea (3 miles from shore)	USEPA	The existing NPDES VGP, administered by the USEPA, replaced the former VGP for discharges incidental to the normal operation of vessels. All vessels (except recreational vessels and vessels of the Armed Forces of the U.S.) are eligible for coverage under the VGP. Waters of the U.S. are subject to the VGP and include the territorial seas as defined in the CWA section 502(8). The types of vessels covered under the VGP include commercial fishing vessels, cruise ships, ferries, barges, mobile offshore drilling units, oil tankers or petroleum tankers, bulk carriers, cargo ships, container ships, other cargo freighters, refrigerant ships, research vessels, emergency response vessels, including firefighting and police vessels, and any other vessels operating in a capacity as a means of transportation. Effluent streams eligible for coverage under the VGP: deck washdown and runoff, bilge water, ballast water, and numerous other specific effluents.	Dec. 19, 2013
Small Vessel General Permit (sVGP)	Territorial Sea (3 miles from shore)	USEPA	A small Vessel General Permit (sVGP) for discharges incidental to the normal operation of vessels was proposed by the USEPA in December 2011, to cover all vessels (except recreational and armed forces vessels) less than 79 feet in length. The USEPA has taken comments on the proposed sVGP and is working on a final decision. Currently, except for ballast water discharges, NPDES permits are not required for any discharges incidental to normal operation of commercial fishing vessels and other non-recreational vessels less than 79 feet. However, unless Congress takes additional action, the moratorium from the requirement to obtain permit coverage for incidental discharges from these vessels expires December 18, 2014. EPA published a draft small Vessel General Permit (sVGP) in 2013 to provide for permit coverage for these incidental discharges and intends to finalize the sVGP at a later date.	2014
Uniform National Discharge Standards (UNDS)	Out to 12 nm from coastline	USEPA and DOD	Section 312(n) of the CWA, added in 1996, requires the USEPA and DOD to identify and evaluate discharges of Armed Forces vessels to determine which discharges require control for protection of the environment and to set standards for those discharges. USEPA and DOD, in consultation with the USCG, have been working on pollution control standards to apply to most U.S. Armed Forces vessels. The standards will be for the required use of marine pollution control devices (MPCDs) to control discharges incidental to the normal operation of an armed forces vessel, and will apply out to 12 nm from the coastline. The final rule to identify and characterize discharges was published May 10, 1999. Rulemaking is underway to establish MPCD performance standards, and within one year after those are established, DOD will have developed implementing instructions.	Ongoing

Table 4.10-1. Projects with Potential to Contribute to Cumulative Impacts

Project	Project Location	Project Sponsor	Project Description	Projected Completion
Russian River Estuary Management	Russian River, Sonoma Co	Sonoma County Water Agency	The key relevant components of this management plan include: (1) seasonal breaching of sandbar across river mouth to allow outflow of river water to prevent flooding upstream and doing so in a way that prevents ocean water from entering the lagoon; (2) Studying the effects on the estuary of the jetty at Goat Rock State Beach and evaluating alternatives that include removing or notching the jetty. The management plan also includes long term monitoring.	Ongoing
Sonoma County Local Coastal Plan Update	Sonoma Co Coastal Zone	Sonoma County Permit and Resource Management Department	The Local Coastal Plan is being updated to be consistent with the 2008 County General Plan and to update/develop policies regarding sea level rise, water quality, biotic resources, coastal erosion and public access. No substantive changes in land use or zoning designations are proposed.	2014

4.10.4 Cumulative Impacts

As the proposed expansion of the sanctuaries is a regulatory and management action rather than a specific development project, the cumulative effects are related primarily to area-wide management of ocean resources. Several of the projects listed in Table 4.10-1 are regulatory as well. For purposes of this cumulative analysis, it is assumed that the programs in Table 4.10-1 would be approved and implemented.

The combination of the proposed action and programs and projects listed in Table 4.10-1 would result in cumulative beneficial effects in both physical and biological resources. There would be no substantive cumulative effects in the topic areas of cultural and maritime heritage resources or homeland security/military uses beyond what was identified for the proposed action and alternatives. The cumulative projects or programs identified in Table 4.10-1 would not cause adverse impacts on these issue/use areas. In other issues, as described below, the proposed action's contribution to any adverse cumulative effects would be less than significant. In most issue areas, the existing regulations alternative and the two sub-alternatives would have the same cumulative effect as the proposed action. Where there are differences in cumulative impacts among the alternatives within an issue area, such differences are noted.

Physical and Biological Resources

The proposed sanctuary expansion would not contribute to any substantive adverse impacts on air quality or climate change, geology or oceanography, water quality or biological resources. The proposed action, combined with the national rulemaking, EFH review, new VGP, sVGP and UNDS, and MBNMS expansion, would have an overall beneficial cumulative effect on physical and biological resources in the region. The combined resource protection provided by these programs/regulations would result in positive influences on marine habitats and resources.

The only cumulative projects with potential to create an adverse physical or biological effect on the expansion area are current and potential activities associated with the Russian River Estuary Management Program. The Russian River Estuary breaching program involves seasonally breaching the mouth of the Russian River when closed naturally by a sandbar. The breaching is required to allow the outflow of fresh water during times when the river mouth is closed and water levels become high enough to cause flooding of land uses along the river. Breaching is not required for habitat or biological resource protection. The Environmental Impact Report (EIR) prepared for the management of the estuary water levels did not identify any significant adverse impacts on the ocean environment from breaching activities. The breaching activities would be conducted with numerous mitigation measures and it appears that issues such as disturbance of the water column or nearshore areas are negligible. The EIR was primarily focused on impacts on the estuary and river. Impacts from temporary breaching activities on pinniped haulout areas along the ocean shoreline near the river mouth were identified as being less than significant with mitigation. Impacts on pinniped haulout areas in the interior parts of the Russian River, from increased seasonal inundation were identified as significant and unavoidable (SCWA 2010). These interior haulout areas are not within the proposed sanctuary expansion area. The proposed sanctuary expansion would not, in any way, contribute to this adverse impact on wildlife and therefore would not contribute to adverse cumulative effects on wildlife.

Potential removal of the jetty at Goat Rock beach would possibly cause short-term disturbance of the nearshore and shoreline area. The proposed sanctuary expansion would not cause any adverse impacts

along the nearshore or shoreline area and therefore would not contribute to cumulative impacts associated with the jetty removal project.

This analysis would also apply to the existing regulations alternative, Arena Cove boundary alternative and MPWC zones alternative. The No Action alternative would maintain the status quo of ocean management in the expansion area. No additional resource protections from proposed sanctuary regulations would occur. The potential for adverse impacts related to discharges and wildlife disturbance would continue.

Commercial Fishing and Aquaculture

The proposed action does not regulate commercial fishing and would not contribute to regional closures of fishing grounds or other fishery management activities arising from the EFH Five Year Review (see Table 4.10-1). The proposed CBNMS and GFNMS expansion would have beneficial impacts on commercial fisheries and less than significant adverse impacts on commercial fishing operations, as a result of the proposed discharge regulations. The combination of proposed sanctuary discharge regulations, MBNMS expansion (with associated discharge regulations), new VGP and sVGP (if approved) requirements and national marine sanctuary rule making regarding release of introduced species may have some adverse cumulative effects on commercial fishing operators.

The combined expansion of the sanctuaries under the proposed action, the MBNMS expansion near San Francisco and new VGP would result in a larger area where commercial fishing vessels would be prohibited from discharging certain effluents and other materials. However, the proposed action's exemption for clean graywater discharge in both the existing and proposed sanctuary boundaries would partially minimize this effect. The existing regulations alternative would have a slightly higher level of consequences because there would be no graywater exemption. The impacts on commercial fishing from the discharge regulations were identified as less than significant in Section 4.4 (Commercial Fishing and Aquaculture). The cumulative effect would also be less than significant because the MBNMS expansion area is relatively small and CBNMS, GFNMS and MBNMS would include an exemption for clean graywater discharges.

Socioeconomic Resources, Human Uses, and Environmental Justice

The proposed action would result in beneficial impacts on tourism, recreation, local economics and research and education. Minor adverse impacts on recreation due to discharge regulations and limits on MPWC use may occur, as a result of the proposed action. The projects/programs listed in Table 4.10-1 would not cause adverse impacts on socioeconomic resources or human uses in the study area and therefore the cumulative effect would not be greater than what was identified for the proposed action or existing regulations alternative. Neither the proposed action nor the cumulative projects would contribute to adverse effects on environmental justice.

Offshore Energy

The proposed action and action alternatives would result in the prohibition of offshore oil and gas development in the expansion area, as well as in the existing CBNMS and GFNMS. This effect was identified as less than significant in Section 4.7 (Offshore Energy). Oil and gas development would be prohibited in the proposed MBNMS expansion area, which includes a small area on the margin of the Bodega oil and gas basin. The addition of this narrow strip of ocean to the overall sanctuary area would have a negligible impact on offshore energy development. Oil and gas development is permanently banned within State

waters (3 miles from shore) and the remaining area outside of State waters that would be added to MBNMS is very small. The overall cumulative impact on oil and gas development is less than significant due to the fact that there are no existing or planned oil or gas facilities in the region and the total amount of potential resources precluded from future development are a small fraction of the U.S. oil and gas resources.

Alternative energy development such as wind or wave projects could potentially be allowed through a permit or authorization from the sanctuaries, if it met a series of criteria according to 15 CFR Part 922.48; Part 922.83 and Part 922.113. The other projects listed in Table 4.10-1 would not affect alternative energy development. Therefore, cumulative impacts on offshore energy are less than significant. The existing regulations alternative would result in more stringent regulations (i.e., no authorization process to allow seabed disturbance or discharges) that may have a greater adverse impact on development of alternative energy projects in the future. However, there are no existing or planned energy facilities in the proposed expansion area; the impact would be less than significant.

Marine Transportation

Similar to commercial fishing, there is the potential for some adverse impacts on marine transportation from the combination of the discharge regulations of the proposed action, expansion of MBNMS and establishment of the new VGP and sVGP requirements. With the proposed discharge regulations for the CBNMS and GFNMS expansion area and the addition of the MBNMS expansion area, vessels could be required to hold discharges for a longer distance, if transiting up or down the coastline. The proposed action's impacts on marine transportation were identified as less than significant. The incremental increase in impact associated with the cumulative scenario is also considered less than significant; all three sanctuaries would include an exemption for discharge of sewage from Type II and II marine sanitation devices and for clean graywater discharge. The existing regulations alternative would have a slightly higher contribution to cumulative impacts because it would not include an exemption for clean graywater discharges, but the impact would still be less than significant.

Homeland Security and Military Uses

There is the potential for some adverse impacts on homeland security and military uses involving vessel discharges from the combination of the discharge regulations of the proposed action, and the UNDSs, once implemented in the future. However, given the military exemptions in the proposed action for CBNMS and GFNMS and the proposed authorization and permit provisions, cumulative impacts on homeland security and military uses would be minor and less than significant.

4.11 Comparison of Alternatives

4.11.1 Introduction

This section presents a summary comparison of the overall potential environmental impacts of the proposed action and alternatives. Environmental advantages and disadvantages of each alternative are discussed. Sections 4.2 through 4.9 address the individual impacts associated with each alternative, by topic. At the end of this section, a benefits-cost analysis is provided for the proposed action and alternatives, as another method to compare alternatives. The alternatives, as described in Chapter 3, are the proposed action, no action, existing regulations, Arena Cove boundary alternative and MPWC zones alternative. The Arena Cove boundary is a sub-alternative that could be implemented with either the proposed action or existing regulations alternative. The MPWC zones alternative is a sub-alternative to the proposed action. Alternatives that were eliminated from further evaluation are listed in Section 3.7 (Other Alternatives Considered and Eliminated).

4.11.2 Summary Comparison of Impacts

There are environmental tradeoffs among the alternatives and even within resource issue areas or topics, making it difficult to summarize the net effect of the alternatives. Since all of the impact analysis is necessarily qualitative, specifying precise differences among the alternatives is even more difficult. All of the action alternatives would result in beneficial impacts in one or more environmental issue areas, and none of the alternatives would result in a significant adverse impact. The type of impact (e.g., beneficial, adverse or no impact) and relative environmental advantages and disadvantages of the proposed action and alternatives are summarized, by topic, in Table 4.11-1 at the end of this section.

The Proposed Action

The proposed action, NOAA's preferred alternative, would result in substantial beneficial effects in physical resources, biology, cultural and maritime heritage resources, commercial fisheries and socioeconomics (economic factors, recreation, tourism) due to the added protection of resources afforded by the proposed sanctuary regulations and increased awareness of the area's resources. At the same time, the implementation of sanctuary regulations would involve restrictions that could cause adverse, but less than significant, effects on commercial fishing operators, recreational boating, airspace use, marine transportation and homeland security and military vessel operations. These impacts are associated with the regulatory burdens of discharge restrictions, limitations on MPWC and area-specific flight restrictions within the sanctuaries.

No Action Alternative

The impact analysis for No Action describes the impacts of the status quo, where the proposed expansion area is not included in the national marine sanctuary system and continues to be regulated by existing federal and state regulations. No Action results in a no impact determination. This does not suggest that there are not adverse impacts presently occurring and would continue to occur; rather, choosing No Action will not result in any additional adverse or beneficial impacts. Attempting to identify impacts of potential future activities that could occur under the No Action alternative would be speculative and beyond the scope of this EIS. There are opportunity costs associated with the No Action alternative, as identified in Section 4.6 (Socioeconomic Resources, Human Uses, and Environmental Justice).

In summary, the No Action alternative would have the following implications:

- Oil and gas development may occur in federal waters, if federal agencies determined to pursue lease sales in the area in the future; oil and gas facilities would not be allowed in State waters due to the permanent ban on such development by the State government.
- Alternative energy projects could be pursued in both State and federal waters and no additional permitting requirements would be placed on them.
- MPWC use would continue to be allowed throughout the proposed expansion area.
- There would be no added protection for water quality, biological resources and cultural resources that is offered by the proposed action regulations and prohibited activities.
- Commercial fishing, recreational, homeland security, military and other vessels would not be subject to increased discharge regulations, represented by the proposed action and existing regulations alternative.
- Human uses (e.g., offshore cables, piers, moorings, etc.) would not be subject to discharge or seabed disturbance regulations.

Existing Regulations Alternative

This alternative is very similar to the proposed action, in that it offers needed protection to physical, biological and cultural resources in the expansion area, compared to existing conditions. It would have slightly higher levels of beneficial effects in these resource areas, compared to the proposed action, as described below. The existing regulations alternative would have the same impacts as the proposed action in the topic area of offshore oil and gas development.²³ Compared to the proposed action, this alternative would have the following differences in impacts due to differences in the regulations that would be applied to the expansion area:

- Physical Resources – Slightly higher level of beneficial impacts related to air, oceanography and water quality, due to the sanctuary-wide prohibition of MPWC and absence of the proposed authorization process (which could allow activities involving discharges or seabed disturbance);
- Biological Resources – Slightly higher level of beneficial impacts related to wildlife protection, due to the sanctuary-wide prohibition of MPWC use, no clean graywater discharge exemption and absence of an authorization process; less wildlife benefits with the use of ASBS rather than SWPZs for cargo vessel and overflight restrictions.
- Cultural and Marine Heritage Resources – Slightly less benefits in CBNMS due to the absence of the historical resource prohibition that is included in the proposed action; slightly more potential benefits with the absence of the proposed action's authorization process that would have the potential to allow some otherwise prohibited activities such as seabed alteration;
- Interference with Enforcement – The prohibition against interfering with an enforcement action, as described in the proposed action, would not be included in this alternative and therefore the beneficial

²³ The existing regulations would allow oil and gas pipelines in limited conditions, but since there are no existing or planned oil and gas development projects in the area, this is not considered a substantive difference.

impacts (physical resources, biological resources, cultural) associated with this regulation would not occur.

- **Commercial Fishing, Recreational Boating, Marine Transportation, Homeland Security and Military Uses** – Slightly greater impacts due to more restrictive discharge regulations (no exemption for clean graywater).
- **Land Use and Alternative Energy Development** – Slightly greater adverse impacts on future development. Without the proposed action's authorization regulations, projects that involved prohibited discharges or seabed disturbance would not be allowed unless they qualified for a sanctuary manager's permit, as described below.

Without an authorization process, which is included in the proposed action, beneficial impacts on physical, biological and cultural resources may be higher than the proposed action because there would be no means to approve activities involving prohibited discharges or alteration of the seabed. Pre-existing uses and activities in the expansion area could only be permitted if they were certified at the time of expansion approval (as allowed under the nationwide sanctuary regulations) or permitted by the individual sanctuaries if the Sanctuary Superintendent finds that the activity would:

- (1) Further research or monitoring related to sanctuary resources and qualities;
- (2) Further the educational value of the sanctuary;
- (3) Further salvage or recovery operations in or near the sanctuary in connection with a recent air or marine casualty; or
- (4) Assist in managing the sanctuary.

Overall, the existing regulations alternative would offer environmental advantages over the proposed action in the natural resource areas, but would have disadvantages related to socioeconomics (land use, recreation), and to a lesser extent commercial fishing, marine transportation and homeland security.

Arena Cove Boundary Alternative

This boundary alternative, which could be implemented with either the proposed action or existing regulations alternative, would include the inner Arena Cove in the sanctuary boundaries. By applying sanctuary regulations to this area, this alternative would offer potential increased benefits (relative to the proposed action or existing regulations) in the issue areas of physical resources (air and water quality), biological resources and cultural and marine heritage resources due to protections afforded by the sanctuary regulations. Including this area in the sanctuary and extending the proposed or existing regulations to the inner cove would have the potential to result in a small incremental increase in adverse impacts on commercial fishing, recreation, land use, offshore energy (future wind or wave energy development) and marine transportation, due to the implementation of discharge and seabed disturbance regulations in the cove. The overall impact would still be less than significant. No additional impacts on homeland security or military uses would be expected to occur.

MPWC Zones Alternative

This alternative could be implemented with the proposed action regulations, with the only difference being the size and location of two of the four proposed MPWC zones. The slight differences in size and location would have minor implications in the topic areas of biological resources and recreation. None of the other issue areas or user groups would be affected differently by this alternative. Alternative Zone 4A would be smaller than the proposed action zone and would restrict shoreline access points, which would further limit potential impacts on wildlife and have a slightly higher level of beneficial impact on biological resources.

Table 4.11-1. Comparison of Alternatives

Topic	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative*	MPWC Zones Alternative**
Physical Resources (Air quality, oceanography, geology and water quality)	+	O	+	+	+
Biological Resources	+	O	+	+	+
Commercial Fishing and Aquaculture	+	O	+	+	NA
	(fisheries) ~ (fishing operations)		~ Slightly higher level of adverse impact than proposed action; slightly higher benefit on fisheries	~ Same as proposed action	
Cultural and Maritime Heritage Resources	+	O	+	+	NA
			Similar to proposed action, some tradeoffs	Slightly higher benefit than proposed action due to implementation of protection in the cove	
Socioeconomics	O	O	O	O	NA

Key to symbols:

O = No Impact

~ = Less Than Significant Adverse Impact

— = Significant Adverse Impact (Note: no alternative would result in that level of impact)

+

NA = Not Applicable

Table 4.11-1. Comparison of Alternatives

Topic	Proposed Action	No Action Alternative	Existing Regulations	Arena Cove Boundary Alternative*	MPWC Zones Alternative**
Environmental Justice	O	O	O	O	NA
Tourism	+	O	+	+	NA
			Same as proposed action	Same as proposed action	
Land Use and Development	~	O	~	~	NA
			Higher level of adverse impact than proposed action; no authorization process to approve new discharges or construction on seabed.	Higher level of adverse impact than proposed action; any future uses would be subject to sanctuary regulations and permits	
Recreation	~	O	~	~	~
			Higher level of adverse impact than proposed action	Same as proposed action	Same as proposed action
Research and Education	+	O	+	+	NA
			Same as proposed action	Same as proposed action	
Offshore Energy Development	~	O	~	~	NA
			Higher level of adverse impact than proposed action	Same as proposed action	
Marine Transportation	~	O	~	~	NA
			Higher level of adverse impact than proposed action	Same as proposed action	
Homeland Security and Military	~	O	~	O	NA
			Higher level of adverse impact than proposed action		

* Could be implemented with either the proposed action or existing regulations alternative

** Could only be implemented with the proposed action regulations

Key to symbols:

O = No Impact

~ = Less Than Significant Adverse Impact

— = Significant Adverse Impact (Note: no alternative would result in that level of impact)

+ = Beneficial Impact

NA = Not Applicable

Chapter 5

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Appendix A

Index

Appendix A

INDEX

— A —

Act to Prevent Pollution from Ships: 4.2-14, 4.2-18, 4.4-15, 4.8-10, 4.9-4–4.9-6

Air quality: ES-17, 4.1-1–4.1-2, 4.2-1–4.2-4, 4.2-16, 4.2-21, 4.2-23–4.2-26, 4.10-6, 4.11-4

AIS: See Automatic Identification System

Alternative energy: 4.1-3, 4.3-6, 4.7-3–4.7-8, 4.10-8, 4.11-2–4.11-3

Alternative MPWC Zones: ES-15, ES-17, 4.2-26, 4.3-23, 4.4-20, 4.5-16, 4.6-43, 4.7-8, 4.8-15, 4.9-14, 4.11-4

Alternatives: ES-5–ES-6, ES-11, 1-8, 2-4, 3-1–3-2, 3-42, 4.6-1, 4.8-14, 4.11-1, 4.11-4

APPS: See Act to Prevent Pollution from Ships

Aquaculture: ES-10–ES-11, ES-13, ES-19, 3-12–3-13, 3-31, 4.1-1, 4.2-11, 4.4-1, 4.4-7–4.4-8, 4.4-10, 4.4-16–4.4-18, 4.6-28, 4.6-38, 4.6-40, 4.10-3, 4.10-7, 4.11-4

Areas of Special Biological Significance: ES-11–ES-12, ES-15, 1-3, 3-14–3-15, 3-20, 3-31, 3-35–3-36, 3-39, 4.2-9–4.2-10, 4.3-18, 4.3-23, 4.6-40, 4.6-42, 4.8-12–4.8-14, 4.9-12, 4.9-14, 4.11-2

ASBS: See Areas of Special Biological Significance

Automatic Identification System: 4.8-1–4.8-2

— B —

BAAQMD: See Bay Area Air Quality Management District

Bay Area Air Quality Management District: 4.2-2–4.2-4

BEA: See Bureau of Economic Analysis

Biological resources: ES-4, ES-12–ES-13, ES-18, 1-8, 2-3, 3-34, 4.1-1–4.1-2, 4.2-1, 4.3-1, 4.3-14, 4.3-18–4.3-23, 4.4-6, 4.5-14, 4.9-4, 4.10-6, 4.11-2–4.11-4

BLM: See Bureau of Land Management

Bodega Canyon: ES-2, ES-4, 2-1, 3-3, 3-45, 4.2-5, 4.3-1, 4.3-5, 4.3-12, 4.6-25

BOEM: See Bureau of Ocean Energy Management

Bureau of Economic Analysis: 4.6-9, 4.6-11, 4.6-16

Bureau of Land Management: 4.2-5, 4.6-19, 4.6-27–4.6-28, 4.6-31

Bureau of Ocean Energy Management: 4.6-28, 4.7-1–4.7-3, 4.7-5, 4.7-7–4.7-8

— C —

California Air Resources Board: 4.2-2, 4.8-5

California Clean Air Act: 4.2-3

California Coastal Act: 4.2-20, 4.3-18, 4.6-33

California Coastal National Monument: 4.2-5–4.2-6, 4.6-19, 4.6-28, 4.6-31

California Department of Fish and Game: 4.2-4–4.2-6, 4.2-9, 4.3-4–4.3-6, 4.3-8–4.3-9, 4.4-3–4.4-4, 4.4-10, 4.6-21–4.6-24

California Department of Fish and Wildlife: 4.3-12, 4.3-16–4.3-17, 4.4-1–4.4-3, 4.4-5–4.4-8, 4.4-10, 4.4-16, 4.5-15, 4.6-21, 4.6-23–4.6-24, 4.6-28, 4.7-6, 4.9-8

California Endangered Species Act: 4.3-16

California Environmental Quality Act: 4.2-21, 4.6-34

California Fishery Information System: 4.4-1–4.4-3, 4.4-5–4.4-7

California State Lands Commission: 3-33, 4.2-13, 4.2-20, 4.3-18, 4.4-10, 4.4-16, 4.4-19, 4.5-11–4.5-12, 4.5-15, 4.6-33, 4.6-39, 4.7-4, 4.7-6, 4.8-10–4.8-12, 4.9-11

CAMSPAC: See Communications Area Master Station Pacific

CARB: See California Air Resources Board

Cargo vessel: ES-5, ES-11–ES-12, ES-15, ES-18, 3-12, 3-14–3-15, 3-20, 3-23–3-24, 3-36–3-37, 3-39, 4.3-20–4.3-21, 4.3-23, 4.8-1–4.8-3, 4.8-11–4.8-14, 4.11-2

CBNMS: See Cordell Bank National Marine Sanctuary

CCA: See California Coastal Act

CCAA: See California Clean Air Act

CCNM: See California Coastal National Monument

CDFG: See California Department of Fish and Game; California Department of Fish and Wildlife

CDFW: See California Department of Fish and Wildlife; California Department of Fish and Game

CEQ: See Council on Environmental Quality

CEQA: See California Environmental Quality Act

CERCLA: See Comprehensive Environmental Response, Compensation, and Liability Act

CERCLIS: See Comprehensive Environmental Response, Compensation, and Liability System

CESA: See California Endangered Species Act

CFIS: See California Fishery Information System

Clean Water Act: ES-8, 3-4, 4.2-9, 4.2-11–4.2-15, 4.2-17–4.2-19, 4.2-22, 4.3-16, 4.4-12, 4.4-14–4.4-15, 4.6-33, 4.6-36–4.6-37, 4.7-3, 4.8-6–4.8-9, 4.9-4, 4.9-6, 4.9-9–4.9-10, 4.10-4

Climate change: 3-34, 4.1-1, 4.2-3–4.2-4, 4.2-23, 4.3-12, 4.7-6, 4.10-6

Coastal Zone Management Act: 4.2-19, 4.3-16, 4.7-3

Commercial fishing: 4.1-1, 4.2-11, 4.3-17, 4.4-1–4.4-3, 4.4-11–4.4-20, 4.6-1, 4.6-10, 4.6-14, 4.6-28, 4.6-40, 4.8-1, 4.8-8, 4.10-4, 4.10-7–4.10-8, 4.11-1–4.11-4

Communications Area Master Station Pacific: 4.9-2

Comprehensive Environmental Response, Compensation, and Liability Act: 4.2-19

Comprehensive Environmental Response, Compensation, and Liability System: 4.2-19

Cordell Bank National Marine Sanctuary: ES-1–ES-2, ES-4–ES-11, ES-13–ES-14, ES-16, ES-19, 1-1–1-5, 1-7–1-8, 2-1–2-5, 3-1–3-4, 3-9–3-14, 3-31, 3-33–3-36, 3-39–3-40, 3-42, 3-45, 4.1-2, 4.2-5, 4.2-25–4.2-26, 4.3-1, 4.3-5, 4.3-7, 4.3-22, 4.4-1, 4.4-11–4.4-12, 4.4-14, 4.4-16–4.4-18, 4.5-15–4.5-16, 4.6-25, 4.6-30, 4.6-34–4.6-35, 4.6-38–4.6-39, 4.7-1, 4.7-6–4.7-7, 4.8-6, 4.8-9, 4.8-11–4.8-12, 4.9-2–4.9-3, 4.9-7–4.9-9, 4.9-12, 4.10-7–4.10-8, 4.11-2

Council on Environmental Quality: ES-5, 1-7, 2-4, 2-6, 4.1-1–4.1-3, 4.10-1

CSLC: See California State Lands Commission

Cultural resources: ES-13, ES-19, 1-2–1-3, 2-2–2-3, 3-34, 4.5-1, 4.5-12–4.5-14, 4.5-16, 4.6-28, 4.6-35, 4.11-2–4.11-3

Cumulative impacts: 1-8, 4.1-1–4.1-2, 4.4-9, 4.10-1–4.10-2, 4.10-6–4.10-8

CWA: See Clean Water Act

CZMA: See Coastal Zone Management Act

— D —

Department of Defense: ES-9, ES-13, 3-9, 3-13, 3-33, 4.9-1–4.9-4, 4.9-6–4.9-14, 4.10-4

Department of Homeland Security: 4.9-1–4.9-2, 4.9-7–4.9-8

Department of the Interior: 4.4-8, 4.6-27, 4.7-5

DHS: See Department of Homeland Security

DOD: ES-9, ES-13, 3-9, 3-13, 4.9-1, 4.9-3–4.9-4, 4.9-6

DOD: See Department of Defense

DOI: See Department of the Interior

Draft management plan: ES-1, ES-13, 1-5, 2-4, 3-1, 3-33–3-34, 3-39–3-40

— E —

ECA: See Emissions Control Area

Economics: 1-4, 4.1-1, 4.4-10–4.4-11, 4.4-16, 4.4-18–4.4-20, 4.5-2, 4.6-1, 4.6-4, 4.6-8–4.6-11, 4.6-16, 4.6-26–4.6-27, 4.6-29, 4.6-31–4.6-32, 4.6-34–4.6-36, 4.6-40–4.6-42, 4.8-13, 4.10-1, 4.10-7, 4.11-1

EEZ: See Exclusive Economic Zone

EFH: See Essential Fish Habitat

El Niño/Southern Oscillation: 4.4-6

Emissions Control Area: 4.8-5

Endangered Species Act: ES-11, 3-30, 4.3-8, 4.3-11, 4.3-14–4.3-16, 4.3-19, 4.3-21, 4.7-3, 4.9-4, 4.9-12, 4.10-3

Endangered species: ES-11, 3-30, 4.3-8, 4.3-10–4.3-11, 4.3-13–4.3-14, 4.3-16, 4.4-7, 4.7-3, 4.9-4

ENSO: See El Niño/Southern Oscillation

ESA: See Endangered Species Act

Essential Fish Habitat: 4.3-8, 4.3-14–4.3-15, 4.4-9, 4.10-2–4.10-3, 4.10-6–4.10-7

ESU: See Evolutionarily significant unit

Evolutionarily significant unit: 4.3-8

Exclusive Economic Zone: 4.2-20, 4.3-14–4.3-16, 4.4-7–4.4-9, 4.6-29

Existing regulations alternative: ES-7, ES-14, ES-16, 3-37–3-40, 4.2-26, 4.3-22–4.3-23, 4.4-19, 4.5-16, 4.6-41, 4.7-8, 4.8-13–4.8-15, 4.9-13–4.9-14, 4.10-6–4.10-8, 4.11-1–4.11-3, 4.11-5

— F —

FAA: See Federal Aviation Administration

FCAA: See Federal Clean Air Act

Federal Aviation Administration: 4.6-40, 4.9-3–4.9-4

Federal Clean Air Act: 4.2-16

Federal Energy Regulatory Commission: 4.7-3, 4.7-5–4.7-6

Federal Water Pollution Control Act: 4.2-18, 4.4-12, 4.7-3, 4.9-4

FERC: See Federal Energy Regulatory Commission

FWPCA: See Federal Water Pollution Control Act

— G —

Geology: ES-17, 4.1-1, 4.2-4, 4.2-16, 4.2-22–4.2-24, 4.6-24, 4.10-6, 4.11-4

GHG: See Greenhouse gas

Greenhouse gas: 4.2-3–4.2-4, 4.2-16, 4.7-6

— H —

Habitat Areas of Particular Concern: 4.3-14

HAPC: See Habitat Areas of Particular Concern

Homeland Security: ES-22, 4.1-1, 4.2-11, 4.9-1, 4.10-8, 4.11-3, 4.11-5

— I —

IMO: See International Maritime Organization

International Maritime Organization: 4.2-14, 4.2-16, 4.8-4

Introduced species: ES-5, ES-9, ES-11, ES-13–ES-14, ES-19, ES-22, 2-5, 3-8, 3-12–3-13, 3-31, 4.3-1, 4.3-13, 4.3-19–4.3-23, 4.4-11, 4.4-17–4.4-18, 4.6-37–4.6-41, 4.8-6, 4.8-10–4.8-11, 4.8-13, 4.8-15, 4.9-8, 4.9-11, 4.9-14, 4.10-3, 4.10-7

— L —

Land use: ES-20, 4.1-3, 4.6-1, 4.6-27, 4.6-33–4.6-34, 4.6-37–4.6-39, 4.6-41–4.6-42, 4.10-5–4.10-6, 4.11-3, 4.11-5

— M —

Magnuson-Stevens Fishery Conservation and Management Act: 1-1, 4.3-14, 4.4-7–4.4-8, 4.4-11, 4.4-17, 4.5-15, 4.6-35, 4.10-3

Marine Life Management Act: 4.4-10

Marine Life Protection Act: 4.2-6, 4.3-17, 4.4-1, 4.4-4, 4.6-22–4.6-23, 4.6-29–4.6-30, 4.7-3

Marine Mammal Protection: 4.3-15, 4.3-19, 4.3-21, 4.7-4, 4.9-4, 4.10-3

Marine Managed Area: 4.5-12–4.5-13

Marine Plastic Pollution and Control Act: 4.2-14, 4.2-16, 4.2-18, 4.2-24, 4.4-15, 4.8-5, 4.8-10, 4.9-4–4.9-6

Marine Protected Area: 1-2–1-3, 4.5-13, 4.6-20

Marine Protection, Research, and Sanctuaries**Act:** 4.2-18, 4.3-16**Marine Sanitation Device:** ES-8, 3-4, 4.2-11, 4.2-18, 4.2-23, 4.4-11–4.4-13, 4.6-36, 4.8-6–4.8-8, 4.8-13, 4.9-6, 4.9-8–4.9-9, 4.9-13**Marine transportation:** ES-22, 4.1-1, 4.2-11, 4.2-18, 4.2-20, 4.6-1, 4.6-36, 4.8-1–4.8-2, 4.8-5–4.8-10, 4.8-13–4.8-15, 4.10-8, 4.11-1, 4.11-3, 4.11-5**MARPOL:** See Marine Plastic Pollution and Control Act**MBNMS:** See Monterey Bay National Marine Sanctuary**MBTA:** See Migratory Bird Treaty Act**Migratory Bird Treaty Act:** 4.3-15**MLMA:** See Marine Life Management Act**MLPA:** See Marine Life Protection Act**MMA:** See Marine Managed Area**MMPA:** See Marine Mammal Protection**Monterey Bay National Marine Sanctuary:** 1-3–1-5, 2-5, 3-10–3-11, 3-14, 3-30, 3-34, 3-45–3-46, 4.3-1, 4.8-3, 4.8-9, 4.9-2, 4.10-2–4.10-3, 4.10-6–4.10-8**Motorized personal watercraft:** ES-5, ES-7, ES-10–ES-11, ES-13, ES-15–ES-18, ES-20, 2-5, 3-1, 3-12, 3-24–3-31, 3-36, 3-40–3-45, 4.2-26, 4.3-20–4.3-21, 4.3-23, 4.4-11, 4.4-18, 4.4-20, 4.5-16, 4.6-22, 4.6-26, 4.6-35, 4.6-37, 4.6-41, 4.6-43, 4.7-8, 4.8-15, 4.9-8, 4.9-13–4.9-15, 4.10-2, 4.10-7, 4.11-1–4.11-2, 4.11-4**MPA:** See Marine Protected Area**MPRSA:** See Marine Protection, Research, and Sanctuaries Act**MPWC:** See Motorized personal watercraft**MSA:** See Magnuson-Stevens Fishery Conservation and Management Act**MSD:** See Marine Sanitation Device**— N —****NAAQS:** See National ambient air quality standard**NAICS:** See North American Industry Classification System**NANPCA:** See National Aquatic Nuisance Prevention and Control Act**National ambient air quality standard:** 4.2-1–4.2-2, 4.2-21**National Aquatic Nuisance Prevention and Control Act:** 4.3-16**National Contingency Plan:** 4.2-19, 4.8-4**National Environmental Policy Act:** ES-1, ES-5, ES-13, 1-1, 1-7, 2-4–2-5, 3-9, 3-33–3-34, 4.1-1–4.1-3, 4.2-21, 4.3-20, 4.3-22, 4.7-3, 4.7-7, 4.10-1, 4.10-3**National Historic Preservation Act:** 2-2, 4.5-1, 4.5-10–4.5-11, 4.5-14–4.5-15, 4.7-4, 4.10-3**National Marine Fisheries Service:** 3-46, 4.3-7–4.3-9, 4.3-14–4.3-15, 4.4-2–4.4-3, 4.4-8–4.4-9, 4.4-16, 4.6-29**National Marine Sanctuaries Act:** ES-1–ES-2, ES-5, 1-1, 1-3–1-4, 1-7, 2-3–2-4, 3-2, 3-32, 4.2-22, 4.4-7, 4.4-17, 4.5-15, 4.6-39, 4.9-8, 4.10-3**National Marine Sanctuary System:** 1-1–1-3, 2-1, 4.7-5**National Ocean Service:** ES-6, 1-7**National Pollutant Discharge Elimination System:** 4.2-9, 4.2-12, 4.2-15, 4.2-18–4.2-19, 4.2-22, 4.4-13, 4.8-8, 4.10-4**National Priorities List:** 4.2-19**National Register of Historic Places:** 4.5-5, 4.5-10, 4.5-14**NCAB:** See North Coast Air Basin**NCP:** See National Contingency Plan**NDZ:** See No Discharge Zone**NEPA:** See National Environmental Policy Act**NHPA:** See National Historic Preservation Act**NMFS:** See National Marine Fisheries Service or NOAA Fisheries**NMSA:** See National Marine Sanctuaries Act**NMSS:** See National Marine Sanctuary System**No Action alternative:** ES-7, ES-13, ES-16–ES-17, 3-34, 4.2-26, 4.3-22, 4.4-18, 4.5-15, 4.6-40, 4.7-8, 4.8-13, 4.9-13, 4.11-1, 4.11-4**No Discharge Zone:** 4.2-12, 4.4-12, 4.8-7, 4.9-4, 4.9-6, 4.9-10**NOAA Fisheries:** 4.3-8, 4.4-2, 4.6-29**North American Industry Classification System:** 4.6-16

North Coast Air Basin: 4.2-1–4.2-3

NOS: See National Ocean Service

NPDES: See National Pollutant Discharge Elimination System

NPL: See National Priorities List

NRHP: See National Register of Historic Places

— O —

Ocean Thermal Energy Conversion: 4.7-4–4.7-5

Oceanography: ES-17, 4.1-1, 4.2-1, 4.2-4, 4.2-6, 4.2-16, 4.2-22–4.2-24, 4.4-6, 4.6-28, 4.10-6, 4.11-2, 4.11-4

OCSLA: See Outer Continental Shelf Lands Act

Office of National Marine Sanctuaries: ES-1, ES-6, ES-9–ES-10, 1-1–1-4, 1-7–1-8, 2-4, 3-8–3-9, 3-11, 3-13, 3-24, 3-35, 3-42, 3-45, 4.3-1, 4.3-7, 4.3-11–4.3-13, 4.3-20, 4.5-4–4.5-5, 4.5-9, 4.5-15, 4.6-38, 4.8-12, 4.9-7, 4.9-9, 4.9-11, 4.10-2–4.10-3

Office of Renewable Energy Programs: 4.7-5

Oil and gas: ES-14, ES-18–ES-19, ES-21, 3-14, 3-35–3-36, 4.2-17, 4.2-20, 4.2-23, 4.2-25–4.2-26, 4.3-20–4.3-23, 4.4-11, 4.4-17, 4.4-19, 4.6-35, 4.6-37, 4.7-1, 4.7-3–4.7-8, 4.10-7, 4.11-2

ONMS: See Office of National Marine Sanctuaries

OREP: See Office of Renewable Energy Programs

OTEC: See Ocean Thermal Energy Conversion

Outer Continental Shelf Lands Act: 4.2-17, 4.7-5

— P —

Pacific (inter)Decadal Oscillation: 4.4-6

Pacific Fishery Management Council: 4.3-14, 4.4-2–4.4-3, 4.4-8–4.4-9, 4.10-2

Partnership for Interdisciplinary Studies of Coastal Oceans: 4.3-6, 4.3-13, 4.6-30

PDO: See Pacific (inter)Decadal Oscillation

PFMC: See Pacific Fishery Management Council

PISCO: See Partnership for Interdisciplinary Studies of Coastal Oceans

PM10: 4.2-2–4.2-3, 4.2-21

PM2.5: 4.2-2–4.2-3

Point Arena: ES-2, ES-4–ES-6, 1-3, 1-7, 2-1–2-3, 3-3, 3-21, 4.2-4–4.2-7, 4.2-9, 4.3-1–4.3-3, 4.3-5, 4.3-11, 4.3-15, 4.3-17, 4.4-1–4.4-2, 4.4-4, 4.4-6, 4.4-9, 4.5-2–4.5-4, 4.5-7–4.5-8, 4.5-15, 4.6-19, 4.6-21, 4.6-23, 4.6-26–4.6-29, 4.6-31, 4.6-33, 4.7-1, 4.7-7, 4.8-1, 4.8-3, 4.9-1

Point Reyes National Seashore: 1-3–1-4

Ports and Waterways Safety Act: 4.8-4

PRNS: See Point Reyes National Seashore

Public involvement: 1-3–1-5, 1-7–1-8, 2-5, 3-34, 3-39, 3-45, 4.2-11, 4.3-13, 4.3-20, 4.6-31

PWSA: See Ports and Waterways Safety Act

— R —

RCA: See Rockfish Conservation Area

RCRA: See Resource Conservation and Recovery Act

Record of Decision: ES-6, 1-8

Resource Conservation and Recovery Act: 4.2-14, 4.2-19

RHA: See Rivers and Harbors Appropriations Act

Rivers and Harbors Appropriations Act: 4.2-17, 4.3-15

Rockfish Conservation Area: 4.4-9

ROD: See Record of Decision

— S —

SAC: See Sanctuary Advisory Council

San Francisco Air Basin: 4.2-1–4.2-3

San Francisco Deep Ocean Disposal Site: 4.2-15

Sanctuary Advisory Council: 3-42

Scoping: ES-1, ES-6, 1-5, 1-7, 3-2, 3-34, 3-42, 3-45–3-46, 4.1-2, 4.6-24, 4.7-3

SCWA: See Sonoma County Water Agency

SFAB: See San Francisco Air Basin

SF-DODS: See San Francisco Deep Ocean Disposal Site

Shipwrecks: ES-4, 1-2, 1-7, 4.5-1, 4.5-4–4.5-5, 4.5-11–4.5-13, 4.5-15–4.5-16, 4.8-3

SHPO: See State Historic Preservation Officer

SLA: See Submerged Lands Act

Small Vessel General Permit: 4.4-13, 4.8-8, 4.10-4, 4.10-6–4.10-8

Socioeconomics: ES-19, 1-8, 3-1–3-2, 4.1-1–4.1-3, 4.2-11, 4.3-18, 4.4-2, 4.6-1, 4.6-3, 4.6-33–4.6-34, 4.6-37, 4.6-43, 4.8-7, 4.8-9–4.8-10, 4.8-15, 4.9-3, 4.10-7, 4.11-1, 4.11-3–4.11-4

Sonoma County Water Agency: 4.2-9, 4.3-4, 4.6-30, 4.7-3, 4.10-5–4.10-6

Special Wildlife Protection Zone: ES-11–ES-12, ES-15, ES-18, 3-12, 3-14–3-22, 3-24, 3-30, 3-36, 3-39, 4.3-20–4.3-21, 4.3-23, 4.6-40, 4.6-42, 4.8-6, 4.8-11–4.8-14, 4.9-8, 4.9-12, 4.9-14, 4.11-2

State Historic Preservation Officer: 4.5-10

State water quality protection area: 4.2-9

State Water Resources Control Board: ES-12, 3-14, 4.2-8–4.2-10, 4.2-12, 4.2-19, 4.2-21, 4.3-17–4.3-18, 4.4-10

Submerged Lands Act: 4.2-17

sVGP: See Small Vessel General Permit

SWPZ: See Special Wildlife Protection Zone

SWQPA: See State water quality protection area

SWRCB: See State Water Resources Control Board

— T —

THPO: See Tribal Historic Preservation Officer

TRACEN: See U.S. Coast Guard Training Center

Traffic Separation Scheme: 4.8-1, 4.8-4

Tribal Historic Preservation Officer: 4.5-10

TSS: See Traffic Separation Scheme

— U —

U.S. Army Corps of Engineers: 4.2-17–4.2-18, 4.3-15, 4.3-17, 4.3-19, 4.4-8, 4.6-33, 4.6-39, 4.9-3

U.S. Coast Guard Training Center: 4.9-2

U.S. Coast Guard: ES-8, ES-11, 3-4, 3-12, 4.2-11, 4.2-13, 4.2-16, 4.2-18, 4.2-20, 4.3-16, 4.3-18, 4.4-18, 4.6-41, 4.7-4, 4.7-6, 4.8-1–4.8-2, 4.8-4, 4.8-9–4.8-11, 4.9-1–4.9-2, 4.9-4–4.9-5, 4.9-7–4.9-14, 4.10-4

U.S. Environmental Protection Agency: 4.2-2–4.2-3, 4.2-10–4.2-12, 4.2-15–4.2-16, 4.2-18–4.2-19, 4.3-16, 4.4-12–4.4-13, 4.6-29, 4.8-5, 4.8-7–4.8-8, 4.8-10, 4.9-5, 4.10-4

U.S. Fish and Wildlife Service: 1-2, 4.3-14–4.3-15, 4.3-19

UNDS: See Uniform National Discharge Standards

Uniform National Discharge Standards: 4.9-5, 4.10-4, 4.10-6

Upwelling: ES-2, ES-4–ES-5, 1-5, 1-7, 2-1–2-3, 3-45, 4.2-1–4.2-2, 4.2-6–4.2-8, 4.2-15, 4.3-1–4.3-3, 4.3-6, 4.4-6, 4.6-28–4.6-29

USACE: See U.S. Army Corps of Engineers

USCG: See U.S. Coast Guard

USEPA: See U.S. Environmental Protection Agency

USFWS: See U.S. Fish and Wildlife Service

— V —

Vessel General Permit: 4.2-9, 4.2-12–4.2-13, 4.2-15, 4.4-13, 4.8-8–4.8-9, 4.8-11, 4.9-4, 4.9-10–4.9-11, 4.10-4, 4.10-6–4.10-8

Vessel Movement Reporting System: 4.8-4

Vessel traffic service/separation: 4.8-4

Vessel Traffic Service: 4.8-1–4.8-2, 4.8-4

VGP: See Vessel General Permit

VMRS: See Vessel Movement Reporting System

VTSS: See Vessel Traffic Service

VTSS: See Vessel traffic service/separation

— W —

Water quality: ES-12–ES-13, ES-17, 1-5, 3-14, 3-34, 4.1-1, 4.2-1, 4.2-4, 4.2-8–4.2-13, 4.2-15–4.2-20, 4.2-22–4.2-26, 4.3-4, 4.3-13, 4.3-16, 4.3-18, 4.3-20–4.3-22, 4.4-8, 4.4-10–4.4-11, 4.4-15–4.4-19, 4.6-26, 4.6-28–4.6-29, 4.6-37, 4.8-4, 4.8-8, 4.8-10, 4.9-4, 4.10-5–4.10-6, 4.11-2–4.11-4

Wave energy: 4.3-6, 4.7-3, 4.11-3

Wind energy: 4.7-6

Appendix B

Findings and Determinations

To be included in Final EIS

Appendix C

Relationship to Other Legal Requirements

To be included in Final EIS

Appendix D

Revised Terms of CBNMS and GFNMS Designation

Appendix D

REVISED TERMS OF CBNMS AND GFNMS DESIGNATION

Section 304(a)(4) of the NMSA requires that the terms of national marine sanctuary designation include the geographic area included within the Sanctuary; the characteristics of the area that give it conservation, recreational, ecological, historical, research, educational, or esthetic value; and the types of activities subject to regulation by the Secretary to protect these characteristics. Section 304(a)(4) also specifies that the terms of designation may be modified only by the same procedures by which the original designation was made.

To implement this action, the CBNMS and GFNMS terms of designation, published in the Federal Register for CBNMS and GFNMS on Nov. 20, 2008 (73 FR 70488), are proposed to be modified; the modified versions are reproduced here for the reader's convenience. Should there be any discrepancy between this document and the revised terms of designation presented in the notice of proposed rulemaking that accompanies this DEIS, the terms of designation in the notice of proposed rulemaking shall take precedence. The modified terms of designation are proposed to read as follows (new text underlined and deleted text in strikethrough text):

**~~Revised~~—TERMS OF DESIGNATION~~esignation—Document FOR~~ OR ~~THE~~the
CORDELL~~ordell~~ BANK~~ank~~ NATIONAL~~ational~~ MARINE~~arine~~ SANCTUARY~~anctuary~~¹**

Preamble

Under the authority of Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, 16 U.S.C. 1431 *et seq.* (the “Act”), ~~the~~ Cordell Bank, Bodega Canyon, and ~~their~~its surrounding waters and submerged lands offshore northern California, as described in Article ~~II~~2, are hereby designated as the Cordell Bank National Marine Sanctuary (the Sanctuary) for the purpose of protecting and conserving that special, discrete, highly productive marine area and ensuring the continued availability of the conservation, ecological, research, educational, aesthetic, historical, and recreational resources therein.

Article I. Effect of Designation

The Sanctuary was designated on May 24, 1989 (54 FR 22417). Section 308 of the National Marine Sanctuaries Act, 16 U.S.C. 1431 *et seq.* (NMSA), authorizes the issuance of such regulations as are necessary to implement the designation, including managing, protecting and conserving the conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, and aesthetic resources and qualities of the Sanctuary. Section 1 of

¹ Original Source: 54 FR 22417; May 24, 1989. Revised: 73 FR 70488; Nov. 20, 2008.

Article IV of these ~~is~~ Terms of Designation Document lists activities of the types that are either to be regulated on the effective date of final rulemaking or may have to be regulated at some later date in order to protect Sanctuary resources and qualities. Listing does not necessarily mean that a type of activity ~~ies~~ will be regulated; however, if a type of activity is not listed it may not be regulated, except on an emergency basis, unless Section 1 of Article IV is amended to include the type of activity by the same procedures by which the original designation was made.

Article II. Description of the Area

The Sanctuary consists of an approximately 971,399 square nautical mile area of marine waters and the submerged lands thereunder encompassed by a northern boundary extending approximately 250° from the northernmost that begins approximately 6 nautical miles west of Bodega Head in Sonoma County, California and extends west approximately 38 nautical miles, coterminous with the boundary of the Gulf of the Farallones National Marine Sanctuary (GFNMS). From that point, the western boundary of the Sanctuary extends south approximately 38 nautical miles. From that point, the southern boundary of the Sanctuary continues east 15 nautical miles, where it intersects the GFNMS boundary. The eastern boundary of the Sanctuary is coterminous with the GFNMS boundary, and is a series of straight lines connecting in sequence, to the 1,000 fathom isobath northwest of the Bank, then south along this isobath to the GFNMS boundary and back to the northeast along this boundary to the beginning point. The precise boundaries are set forth in the regulations.

Article III. Characteristics of the Area That Give it Particular Value

Cordell Bank and Bodega Canyon ~~are~~ characterized by a combination of oceanic conditions and undersea topography that provides for a highly productive environment in a discrete, well-defined area. In addition, the Bank, Canyon, and ~~their~~ surrounding waters may contain historical resources of national significance. The Bank consists of a series of steep-sided ridges and narrow pinnacles rising from the edge of the continental shelf. The Bank is It lies on a plateau 300-400 feet (91-122 meters) deep and ascends to within about 115 feet (35 meters) of the surface at its shallowest point. Bodega Canyon is about 12 miles (10.8 nautical miles) long and is over 5,000 feet (1,524 m) deep. The seasonal upwelling of nutrient-rich bottom waters and wide depth ranges in the vicinity, have led to a unique association of subtidal and oceanic species. The vigorous biological community flourishing at Cordell Bank and Bodega Canyon includes an exceptional assortment of ~~algae~~, invertebrates, fishes, marine mammals and seabirds. Predators travel from thousands of miles away to feed in these productive waters.

Article IV. Scope of Regulation

Section 1. Activities Subject to Regulation

The following activities are subject to regulation, including prohibition, as may be necessary to ensure the management, protection, and preservation of the conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, and aesthetic resources and qualities of this area:

- a. Depositing or discharging any material or substance;
- b. Removing, taking, or injuring or attempting to remove, take, or injure benthic invertebrates or algae located on the Bank or on or within the line representing the 50 fathom isobath surrounding the Bank;
- c. Exploring for, developing or producing oil, gas or minerals within the Sanctuary~~Hydrocarbon (oil and gas) activities within the Sanctuary;~~
- d. Anchoring on the Bank or on or within the line representing the 50 fathom contour surrounding the Bank;
- e. Activities regarding cultural or historical resources;
- f. Drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary; or constructing, placing, or abandoning any structure, material, or other matter on or in the submerged lands of the Sanctuary;
- g. Taking or possessing any marine mammal, marine reptile, or bird except as permitted under the Marine Mammal Protection Act, Endangered Species Act or Migratory Bird Treaty Act; ~~and~~
- h. Introducing or otherwise releasing from within or into the Sanctuary an introduced species; and
- i. Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Act or Sanctuary regulations.

In addition, a permit or authorization may not be issued for exploring for, developing or producing oil, gas, or minerals within the Sanctuary under any circumstances.

Section 2. Consistency with International Law

The regulations governing activities listed in section 1 of this Article shall apply to foreign flag vessels and foreign persons only to the extent consistent with generally recognized principles of international law, and in accordance with treaties, conventions, and other agreements to which the United States is a party.

Section 3. Emergency Regulations

Where necessary to prevent or minimize the destruction of, loss of, or injury to a Sanctuary resource or quality, or minimize the imminent risk of such destruction, loss, or injury, any and all activities, including those not listed in section 1 of this Article, are subject to immediate regulation, including prohibition, within the limits of the Act on an emergency basis for a period not to exceed 120 days.

Article V. Relation to Other Regulatory Programs

Section 1. Fishing

The regulation of fishing is not authorized under Article IV. All regulatory programs pertaining to fishing, including Fishery Management Plans promulgated under the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1801 *et seq.* (“Magnuson-Stevens Act”), shall remain in effect. All permits, licenses, approvals, and other authorizations issued pursuant to the Magnuson-Stevens Act shall be valid within the Sanctuary. However, all fishing vessels are subject to regulation under Article IV with respect to discharges and anchoring.

Section 2. Defense Activities

The regulation of activities listed in Article IV shall not prohibit any Department of Defense (DOD) activities that are necessary for national defense. All such activities being carried out by DOD within the Sanctuary on the effective date of designation shall be exempt from any prohibitions contained in the Sanctuary regulations. Additional DOD activities initiated after the effective date of designation that are necessary for national defense will be exempted after consultation between the Department of Commerce and DOD. DOD activities not necessary for national defense, such as routine exercises and vessel operations, shall be subject to all prohibitions contained in the Sanctuary regulations.

Section 3. Other Programs

All applicable regulatory programs shall remain in effect, and all permits, licenses, approvals, and other authorizations issued after July 31, 1989 with respect to activities conducted within the original Sanctuary boundary and after the effective date of expansion of the Sanctuary with respect to activities conducted within the expansion area pursuant to those programs shall be valid unless prohibited by regulations implementing Article IV.

Article VI. Alterations to This Designation

The terms of designation, as defined under section 304(a) of the Act, may be modified only by the same procedures by which the original designation is made, including public hearings, consultation with interested Federal, State, and local agencies, review by the appropriate Congressional committees and Governor of the State of California, and approval by the Secretary of Commerce or designee.

REVISED TERMS OF DESIGNATION DOCUMENT FOR THE GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY²

Preamble

Under the authority of Title III of the Marine Protection, Research and Sanctuaries Act of 1972, Public Law 92– 532 (the Act), the waters and submerged lands along the Coast of

² Original Source: 46 FR 7936; January 26, 1981. Revised: 73 FR 70488; Nov. 20, 2008.

California north and south of Alder Creek along the 39th parallel Point Reyes Headlands, between Manchester Beach in Mendocino County ~~Bodega Head~~ and Rocky Point in Marin County and surrounding the Farallon Islands and Noonday Rock along the northern coast of California, are hereby designated a National Marine Sanctuary for the purposes of preserving and protecting this unique and fragile ecological community.

Article I. Effect of Designation

Within the area ~~designated in 1981 as The Point Reyes/Farallon Islands National Marine Sanctuary (the Sanctuary)~~ described in Article II, the Act authorizes the promulgation of such regulations as are reasonable and necessary to protect the values of the Gulf of the Farallones National Marine Sanctuary (the Sanctuary). Section 1 of Article IV of ~~these~~ Terms of Designation Document lists activities of the types that are either to be regulated on the effective date of final rulemaking or may have to be regulated at some later date in order to protect Sanctuary resources and qualities. Listing does not necessarily mean that a type of activity will be regulated; however, if a type of activity is not listed it may not be regulated, except on an emergency basis, unless section 1 of Article IV is amended to include the type of activity by the same procedures by which the original designation was made.

Article II. Description of the Area

The Sanctuary consists of an area of the waters and the submerged lands thereunder adjacent to the coast of California of approximately 2,490.66 square nautical miles (nmi). The boundary extending seaward to a distance of 306 nmi west from the mainland at Manchester Beach and extends south approximately 45 nmi to the northwestern corner of Cordell Bank National Marine Sanctuary (CBNMS), and extends approximately 38 nmi east along the northern boundary of CBNMS, approximately 7 nautical miles west of Bodega Head. The boundary extends from Point Reyes to Bodega Bay to Point Reyes and 12 nmi west from the Farallon Islands and Noonday Rock, and includes the intervening waters and submerged lands. The Sanctuary includes Bolinas Lagoon, Tomales Bay, Giacomini Wetland, Estero de San Antonio (to the tide gate at Valley Ford-Franklin School Road) and Estero Americano (to the bridge at Valley Ford-Estero Road), as well as Bodega Bay, but does not include Bodega Harbor, the Salmon Creek Estuary, the Russian River Estuary, the Gualala River Estuary, the Arena Cove Pier or the Garcia River Estuary. The precise boundaries are defined by regulation.

Article III. Characteristics of the Area That Give It Particular Value

The Sanctuary encompasses a globally significant coastal upwelling center that includes a rich and diverse marine ecosystem and a wide variety of marine habitats, including habitat for over 36 species of marine mammals. Rookeries for over half of California's nesting marine bird populations and nesting areas for at least 12 of 16 known U.S. nesting marine bird species are found within the boundaries. Abundant populations of fish and shellfish are also found within the Sanctuary. The Sanctuary also has one of the largest seasonal concentrations of white sharks (*Carcharodon carcharias*) in the world. The area adjacent to and offshore of Point Arena, due to seasonal winds, currents and oceanography, drives one of the most prominent and persistent upwelling centers in the world, supporting the productivity of the sanctuary. The nutrient rich

water carried down coast by currents promote thriving nearshore kelp forests, productive commercial and recreational fisheries, and diverse wildlife assemblages. Large predators, such as white sharks, travel from thousands of miles away to feed in these productive waters. Rocky shores along the Sonoma and Mendocino County coastlines are largely intact, and teem with crustaceans, algae, fish and birds.

Article IV. Scope of Regulation

Section 1. Activities Subject to Regulation

The following activities are subject to regulation, including prohibition, as may be necessary to ensure the management, protection, and preservation of the conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, and aesthetic resources and qualities of this area:

- a. Exploring for, developing or producing oil, gas, or minerals, within the Sanctuary~~Hydrocarbon operations;~~
- b. Discharging or depositing any substance within or from beyond the boundary of the Sanctuary;
- c. Drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary; or constructing, placing, or abandoning any structure, material, or other matter on or in the submerged lands of the Sanctuary;
- d. Activities regarding cultural or historical resources;
- e. Introducing or otherwise releasing from within or into the Sanctuary an introduced species;
- f. Taking or possessing any marine mammal, marine reptile, or bird within or above the Sanctuary except as permitted by the Marine Mammal Protection Act, Endangered Species Act and Migratory Bird Treaty Act;
- g. Attracting or approaching any animal;~~and~~
- h. Operating a vessel (i.e., watercraft of any description) within the Sanctuary; and
- i. Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Act or Sanctuary regulations.

In addition, a permit or authorization may not be issued for exploring for, developing or producing oil, gas, or minerals within the Sanctuary under any circumstances.

Section 2. Consistency With International Law

The regulations governing the activities listed in section 1 of this Article will apply to foreign flag vessels and persons not citizens of the United States only to the extent consistent

with recognized principles of international law, including treaties and international agreements to which the United States is signatory.

Section 3. Emergency Regulations

Where necessary to prevent or minimize the destruction of, loss of, or injury to a Sanctuary resource or quality, or minimize the imminent risk of such destruction, loss, or injury, any and all activities, including those not listed in section 1 of this Article, are subject to immediate temporary regulation, including prohibition.

Article V. Relation to Other Regulatory Programs

Section 1. Fishing and Waterfowl Hunting

The regulation of fishing, including fishing for shellfish and invertebrates, and waterfowl hunting, is not authorized under Article IV. However, fishing vessels may be regulated with respect to vessel operations in accordance with Article IV, section 1, paragraphs (b) and (h), and mariculture activities involving alterations of or construction on the seabed, or release of introduced species by mariculture activities not covered by a valid lease from the State of California and in effect on the effective date of the final regulation, can be regulated in accordance with Article IV, section 1, paragraph (c) and (e). All regulatory programs pertaining to fishing, and to waterfowl hunting, including regulations promulgated under the California Fish and Game Code and Fishery Management Plans promulgated under the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1801 *et seq.*, will remain in effect, and all permits, licenses, and other authorizations issued pursuant thereto will be valid within the Sanctuary unless authorizing any activity prohibited by any regulation implementing Article IV.

The term “fishing” as used in this Article includes mariculture.

Section 2. Defense Activities

The regulation of activities listed in Article IV shall not prohibit any Department of Defense activity that is essential for national defense or because of emergency. Such activities shall be consistent with the regulations to the maximum extent practicable.

Section 3. Other Programs

All applicable regulatory programs will remain in effect, and all permits, licenses, approvals, and other authorizations issued after January 16, 1981 with respect to activities conducted within the original Sanctuary boundary and after the effective date of the expansion of the Sanctuary with respect to activities conducted within the expansion area~~pursuant thereto~~ will be valid within the Sanctuary unless prohibited by regulations implementing Article IV. No valid lease, permit, license, approval or other authorization for activities in the expansion area of the Sanctuary issued by any federal, State, or local authority of competent jurisdiction and in effect on the effective date of the expansion may be terminated by the Secretary of Commerce or by his or her designee provided the holder of such authorization complies with the certification procedures established by Sanctuary regulations.

Article VI. Alterations to This Designation

The terms of designation, as defined under section 304(a) of the Act, may be modified only by the same procedures by which the original designation is made, including public hearings, consultation with interested Federal, State, and local agencies, review by the appropriate Congressional committees and Governor of the State of California, and approval by the Secretary of Commerce or designee.

Appendix E

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Appendix E

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Appendix F

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Appendix F

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In addition to the EIS preparers listed in Appendix E, the following agencies and persons were consulted during scoping for this EIS or during preparation of this document. During review of the Draft EIS, additional agencies will be consulted.

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Appendix G

Biological Resources Species Lists

Appendix G

BIOLOGICAL RESOURCES SPECIES LISTS

Introduction

This appendix includes the lists of biological species known to occur in the proposed expansion area for CBNMS and GFNMS, as described in Chapter 3 (Description of Proposed Action and Alternatives). Many of these species are the same as those occurring in the existing CBNMS and GFNMS boundaries. The species are listed as follows:

Table G-1 – Fish and Reptiles

Table G-2 – Birds and Mammals

Table G-3 – Invertebrates

Table G-4 – Algae and Plants

These lists include species that have been recorded alive or dead or, for some species of fish, are suspected of occurring within the proposed expansion area for CBNMS and GFNMS based on the documented range of the species. In addition to common and scientific names of each specific taxon, the lists include information or data on Federal listed status. Also noted by asterisk (*) for bird and mammal species, is if the sanctuary is used by that species for foraging, roosting, nesting, and/or rearing of young during its breeding season.

Taxonomic classification, phylogenetic order, and all other information are according to references used in May 2013³ for each class of species, listed at the end of this appendix. Each class has slightly differing criteria for acceptance to the list. For mammals, the list includes all marine species, including vagrants, which have been recorded within sanctuary waters, either observed alive or dead. Only one fresh-water/estuarine species, river otter, is included based on occurrence in coastal bodies of water and because the proposed expansion boundary include habitats where these otters have been documented.

For birds, the list includes all marine species, including vagrants that have been recorded in the proposed expansion area. These birds include nearshore and offshore species. Estuarine species are not included unless they are known to fly over any portion of the proposed expansion area.

³ Information regarding the status for Steller sea lions was updated in January 2014. Steller sea lions in the California, Oregon and Washington population were delisted from the threatened species list.

For reptiles and fish, the lists include those species recorded in the sanctuary plus others suspected of occurring based on records both north and south of the sanctuary, but for which no definite records are currently known.

Species Tables

The headings of the lists include the following categories:

COMMON NAME - The common (English) name of the species.

SCIENTIFIC NAME - The scientific (Latin) name of the species.

FEDERAL STATUS (for fish, reptiles, birds and mammals) - The federal listed status as of May 2013 (as found at URL: <http://ecos.fws.gov/ecos/indexPublic.do>). These designations are given if any population or subspecies occurring in the sanctuary is so listed:

E - Endangered

T - Threatened

D – Delisted since designation of the sanctuary

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
FISH		
Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	
Giant Grenadier	<i>Albatrossia pectoralis</i>	
Longnose Lancetfish	<i>Alepisaurus ferox</i>	
California Slickhead	<i>Alepocephalus tenebrosus</i>	
Oxeye oreo	<i>Alloctytus folletti</i>	
Whitebait Smelt	<i>Allosmerus elongatus</i>	
Thresher Shark	<i>Alopias vulpinus</i>	
American Shad	<i>Alosa sapidissima</i>	
Broad skate	<i>Amblyraja badia</i>	
Pacific Sand Lance	<i>Ammodytes hexapterus</i>	
Barred Surfperch	<i>Amphistichus argenteus</i>	
Calico Surfperch	<i>Amphistichus koelzi</i>	
Redtail Surfperch	<i>Amphistichus rhodoterus</i>	
Wolf-Eel	<i>Anarrhichthys ocellatus</i>	
High Cockscomb	<i>Anoplarchus purpureus</i>	
Fangtooth	<i>Anoplogaster cornuta</i>	
Sablefish	<i>Anoplopoma fimbria</i>	
Daggertooth	<i>Anotopterus pharao</i>	
Finescale Codling	<i>Antimora microlepis</i>	
Penpoint Gunnel	<i>Apodichthys flavidus</i>	
Rockweed Gunnel	<i>Apodichthys fucorum</i>	
Brown Catshark	<i>Apristurus brunneus</i>	
Longnose Catshark	<i>Apristurus kampae</i>	

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
Pacific Argentine	<i>Argentina sialis</i>	
Slender Hatchetfish	<i>Argyropelecus affinis</i>	
Spurred Hatchetfish	<i>Argyropelecus hemigymnus</i>	
Silver Hatchetfish	<i>Argyropelecus lychnus</i>	
Silvery Hatchetfish	<i>Argyropelecus sladeni</i>	
Shiny Loosejaw	<i>Aristostomias scintillans</i>	
Corraline Sculpin	<i>Artedius corallinus</i>	
Padded Sculpin	<i>Artedius fenestralis</i>	
Scalyhead Sculpin	<i>Artedius harringtoni</i>	
Smoothhead Sculpin	<i>Artedius lateralis</i>	
Bonyhead Sculpin	<i>Artedius notospilotus</i>	
Rosylip Sculpin	<i>Ascelichthys rhodorus</i>	
Arrowtooth Flounder	<i>Atheresthes stomias</i>	
Topsmelt	<i>Atherinops affinis</i>	
Jacksmelt	<i>Atherinopsis californiensis</i>	
White Seabass	<i>Atractoscion nobilis</i>	
Tubesnout	<i>Aulorhynchus flavidus</i>	
Highfin Dragonfish	<i>Bathophilus flemingi</i>	
Blackfin poacher	<i>BathYGONUS nigripinnis</i>	
Bigeye Poacher	<i>BathYGONUS pentacanthus</i>	
Snubnose Blacksmelt	<i>Bathylagoides wesethi</i>	
Pacific Blacksmelt	<i>Bathylagus pacificus</i>	
Deepsea Skate	<i>Bathyraja abyssicola</i>	
Sandpaper Skate	<i>Bathyraja interrupta</i>	
White Skate	<i>Bathyraja spinosissima</i>	
Black Skate	<i>Bathyraja trachura</i>	
Silverspotted Sculpin	<i>Belpsias cirrhosus</i>	
Northern Pearleye	<i>Benthalbella dentata</i>	
Rockhead	<i>Bothragonus swanii</i>	
Twoline Eelpout	<i>Bothrocara brunneum</i>	
Soft Eelpout	<i>Bothrocara molle</i>	
Kelp Perch	<i>Brachyistius frenatus</i>	
Pacific Pomfret	<i>Brama japonica</i>	
Red Brotula	<i>Brosomphycis marginata</i>	
White Shark	<i>Carcharodon carcharias</i>	
Blacktail Snailfish	<i>Careproctus melanurus</i>	
Veilfin	<i>Caristius macropus</i>	
Ocean Whitefish	<i>Caulolatilus princeps</i>	
Monkeyface Prickleback	<i>Cebidichthys violaceus</i>	
Dogtooth Lampfish	<i>Ceratoscopelus townsendi</i>	
Basking Shark	<i>Cetorhinus maximus</i>	
Pacific Viperfish	<i>Chauliodus macouni</i>	
Smallhead Flyingfish	<i>Cheilopogon pinnatibarbus</i>	

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
Warty Poacher	<i>Chesnonia verrucosa</i>	
Spotted Cusk Eel	<i>Chilara taylori</i>	
Decorated Warbonnet	<i>Chirolophis decoratus</i>	
Mosshead Warbonnet	<i>Chirolophis nugator</i>	
Roughback Sculpin	<i>Chitonotus pugetensis</i>	
Pacific Sanddab	<i>Citharichthys sordidus</i>	
Speckled Sanddab	<i>Citharichthys stigmaeus</i>	
Roughscale Sole	<i>Clidoderma asperrimum</i>	
Sharpnose Sculpin	<i>Clinocottus acuticeps</i>	
Wooly Sculpin	<i>Clinocottus analis</i>	
Calico Sculpin	<i>Clinocottus embryum</i>	
Mosshead Sculpin	<i>Clinocottus globiceps</i>	
Bald Sculpin	<i>Clinocottus recalvus</i>	
Pacific Herring	<i>Clupea pallasii</i>	
Shoulderspot Grenadier	<i>Coelorinchus scaphopsis</i>	
Pacific Saury	<i>Cololabis saira</i>	
Dolphinfish	<i>Coryphaena hippurus</i>	
Pacific Grenadier	<i>Coryphaenoides acrolepis</i>	
Snubnose Pipefish	<i>Cosmocampus arctus</i>	
Benttooth Bristlemouth	<i>Cyclothone acclinidens</i>	
Veiled Anglemouth	<i>Cyclothone microdon</i>	
Showy Bristlemouth	<i>Cyclothone signata</i>	
Bobtail Snipe Eel	<i>Cyema atrum</i>	
Shiner Perch	<i>Cymatogaster aggregata</i>	
Pile Perch	<i>Damalichthys vacca</i>	
Bigeye Lightfish	<i>Daphnos oculatus</i>	
Diamond Stingray	<i>Dasyatis dipterura</i>	
Pelagic Stingray	<i>Dasyatis violacea</i>	
Whiptail Ribbonfish	<i>Desmodema lorum</i>	
California Headlightfish	<i>Diaphus theta</i>	
Balloonfish	<i>Diodon holocanthus</i>	
Diogenes Lanternfish	<i>Diogenes lanternatus</i>	
Prickly Shark	<i>Echinorhinus cookei</i>	
Blackbelly Snailfish	<i>Elassodiscus caudatus</i>	
Deepsea Sole	<i>Embassichthys bathybius</i>	
Black Perch	<i>Embiotoca jacksoni</i>	
Striped Seaperch	<i>Embiotoca lateralis</i>	
Flatcheek Eelpout	<i>Embryx crotalina</i>	
Northern Anchovy	<i>Engraulis mordax</i>	
Buffalo Sculpin	<i>Enophrys bison</i>	
Bull Sculpin	<i>Enophrys taurina</i>	
Petrale Sole	<i>Eopsetta jordani</i>	
Black Hagfish	<i>Eptatretus deani</i>	

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
Pacific Hagfish	<i>Eptatretus stoutii</i>	
Skilfish	<i>Erilepis zonifer</i>	
Pacific Cod	<i>Gadus macrocephalus</i>	
Tope or Soupfin Shark	<i>Galeorhinus galeus</i>	
Threespine Stickleback	<i>Gasterosteus aculeatus</i>	
White Croaker	<i>Genyonemus lineatus</i>	
Striped Kelpfish	<i>Gibbonsia metzi</i>	
Crevice Kelpfish	<i>Gibbonsia montereyensis</i>	
Rex Sole	<i>Glyptocephalus zachirus</i>	
Northern Clingfish	<i>Gobiesox maeandricus</i>	
Red Irishlord	<i>Hemilepidotus hemilepidotus</i>	
Brown Irishlord	<i>Hemilepidotus spinosus</i>	
Giant Kelpfish	<i>Heterostichus rostratus</i>	
Kelp Greenling	<i>Hexagrammos decagrammus</i>	
Rock Greenling	<i>Hexagrammos superciliosus</i>	
Bluntnose Sixgill Shark	<i>Hexanchus griseus</i>	
Flathead Sole	<i>Hippoglossoides elassodon</i>	
Pacific Halibut	<i>Hippoglossus stenolepis</i>	
Spotted Ratfish	<i>Hydrolagus colliei</i>	
Spotfin Surfperch	<i>Hyperprosopon anale</i>	
Walleye Surfperch	<i>Hyperprosopon argenteum</i>	
Silver Surfperch	<i>Hyperprosopon ellipticum</i>	
Surf Smelt	<i>Hypomesus pretiosus</i>	
Kelp Poacher	<i>Hypsagonus mozinoi</i>	
Diamond Turbot	<i>Hypsopsetta guttulata</i>	
Rainbow Surfperch	<i>Hypsurus caryi</i>	
Dusky Sculpin	<i>Icelinus burchami</i>	
Threadfin Sculpin	<i>Icelinus filamentosus</i>	
Frogmouth Sculpin	<i>Icelinus oculatus</i>	
Yellowchin Sculpin	<i>Icelinus quadriseriatus</i>	
Spotfin Sculpin	<i>Icelinus tenuis</i>	
Medusafish	<i>Icichthys lockingtoni</i>	
Ragfish	<i>Icosteus aenigmaticus</i>	
Pacific Blackdragon	<i>Idiacanthus antrostomus</i>	
Butter Sole	<i>Isopsetta isolepis</i>	
Shortfin Mako	<i>Isurus oxyrinchus</i>	
Longfin Sculpin	<i>Jordania zonope</i>	
Sixspot Prickleback	<i>Kasatkia seigeli</i>	
Skipjack Tuna	<i>Katsuwonus pelamis</i>	
Oceanic Pufferfish	<i>Lagocephalus lagocephalus</i>	
Salmon Shark	<i>Lamna ditropis</i>	
Brokenline Lanternfish	<i>Lampanyctus jordani</i>	
Western River Lamprey	<i>Lampetra ayersii</i>	

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
Pacific Lamprey	<i>Lamprera tridentata</i>	SC
Opah	<i>Lampris regius</i>	
Escolar	<i>Lepidocybrium flavobrunneum</i>	
Bay Goby	<i>Lepidogobius lepidus</i>	
Rock Sole	<i>Lepidopsetta bilineata</i>	
Pacific Scabbardfish	<i>Lepidopus fitchi</i>	
Staghorn Sculpin	<i>Leptocottus armatus</i>	
Slender Barracudina	<i>Lestidiops ringens</i>	
Northern Smoothtongue	<i>Leuroglossus schmidtii</i>	
California Smoothtongue	<i>Leuroglossus stilbius</i>	
Southern Ringtail Snailfish	<i>Liparis adiastrum</i>	
Tidepool Snailfish	<i>Liparis florae</i>	
Slipskin Snailfish	<i>Liparis fuscus</i>	
Slimy Snailfish	<i>Liparis mucosus</i>	
Popeye Blacksmelt	<i>Lipolagus ochotensis</i>	
Showy Snailfish	<i>Lipris pulchellus</i>	
Louvar	<i>Luvarus imperialis</i>	
Snakehead eelpout	<i>Lycenchelys crotalinus</i>	
Blackmouth Eelpout	<i>Lycodapus fierasfer</i>	
Pallid Eelpout	<i>Lycodapus mandibularis</i>	
Bigfin Eelpout	<i>Lycodes cortezianus</i>	
Black Eelpout	<i>Lycodes diapterus</i>	
Blackbelly Eelpout	<i>Lycodes pacificus</i>	
Bearded Eelpout	<i>Lyconema barbatum</i>	
Slender Sole	<i>Lyopsetta exilis</i>	
Pacific Barreleye	<i>Macropinna microstoma</i>	
Highsnout Bigscale	<i>Melamphaes lugubris</i>	
Midwater Eelpout	<i>Melanostigma pammelas</i>	
Pacific Hake	<i>Merluccius productus</i>	
Pacific Tomcod	<i>Microgadus proximus</i>	
Reef Perch	<i>Micrometrus aurora</i>	
Dwarf Perch	<i>Micrometrus minimus</i>	
Dover Sole	<i>Microstomus pacificus</i>	
Ocean Sunfish	<i>Mola mola</i>	
Striped Bass	<i>Morone saxatilis</i>	
Gray Smoothhound	<i>Mustelus californicus</i>	
Brown Smoothhound	<i>Mustelus henlei</i>	
Bat Ray	<i>Myliobatis californica</i>	
Pinpoint Lampfish	<i>Nannobranchium regale</i>	
Broadfin Lampfish	<i>Nannobranchium ritteri</i>	
Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	
Slender Snipe Eel	<i>Nemichthys scolopaceus</i>	
Sarcastic Fringehead	<i>Neoclinus blanchardi</i>	

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
Onespot Fringehead	<i>Neoclinus uniornatus</i>	
California Grenadier	<i>Nezumia stelgidolepis</i>	
Broadnose Sevengill Shark	<i>Notorynchus cepedianus</i>	
Patchwork Lampfish	<i>Notoscopelus resplendens</i>	
Pygmy Poacher	<i>Odontopyxis trispinosa</i>	
Tidepool Sculpin	<i>Oligocottus maculosus</i>	
Saddleback Sculpin	<i>Oligocottus rimensis</i>	
Rosy Sculpin	<i>Oligocottus rubellio</i>	
Fluffy Sculpin	<i>Oligocottus snyderi</i>	
Pink Salmon	<i>Oncorhynchus gorbuscha</i>	
Chum Salmon	<i>Oncorhynchus keta</i>	T
Coho Salmon [Silver Salmon]	<i>Oncorhynchus kisutch</i>	E & T regional
Rainbow Trout [Steelhead]	<i>Oncorhynchus mykiss</i>	T
Sockeye Salmon	<i>Oncorhynchus nerka</i>	
Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	E & T regional
Pacific Snake Eel	<i>Ophichthus triserialis</i>	
Yellow Snake Eel	<i>Ophichthus zaphochir</i>	
Lingcod	<i>Ophiodon elongatus</i>	
Snubnose Sculpin	<i>Orthonopias triacis</i>	
Señorita	<i>Oxyjulis californica</i>	
Painted Greenling	<i>Oxylebius pictus</i>	
Tubenose Poacher	<i>Pallasina barbata</i>	
California Halibut	<i>Paralichthys californicus</i>	
Red Snailfish	<i>Paraliparis dactylosus</i>	
Thornback Sculpin	<i>Paricelinus hopliticus</i>	
Filetail Catshark	<i>Parmaturus xanirurus</i>	
English Sole	<i>Parophrys vetulus</i>	
Pacific Pompano	<i>Peprilus simillimus</i>	
Sharpnose Seaperch	<i>Phanerodon atripes</i>	
White Seaperch	<i>Phanerodon furcatus</i>	
Saddleback Gunnel	<i>Pholis ornata</i>	
Red Gunnel	<i>Pholis schultzi</i>	
Hundred-Fathom Codling	<i>Physiculus rastrelliger</i>	
Ribbon Prickleback	<i>Phytichthys chirus</i>	
Starry Flounder	<i>Platichthys stellatus</i>	
Pacific Thornback	<i>Platyrrhinoidis triseriata</i>	
Bluebarred Prickleback	<i>Plectobanchus evides</i>	
C-O Sole	<i>Pleuronichthys coenosus</i>	
Curlfin Sole	<i>Pleuronichthys decurrens</i>	
Hornyhead Turbot	<i>Pleuronichthys verticalis</i>	
Sturgeon Poacher	<i>Podothecus accipenserinus</i>	
Plainfin Midshipman	<i>Porichthys notatus</i>	
Whitebarred Prickleback	<i>Poroclinus rothrocki</i>	

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
Crested Bigscale	<i>Poromitra crassiceps</i>	
Blue Shark	<i>Prionace glauca</i>	
Lumptail Searobin	<i>Prionotus stephanophrys</i>	
California Flashlightfish	<i>Protomyctophum crockeri</i>	
Bigeye Lanternfish	<i>Protomyctophum thompsoni</i>	
Sand Sole	<i>Psettichthys melanostictus</i>	
Robust Blacksmelt	<i>Pseudobathylagus milleri</i>	
North Pacific Armorhead	<i>Pseudopentaceros wheeleri</i>	
Blob Sculpin	<i>Psychrolutes phrictus</i>	
Slim Sculpin	<i>Radulinus asprellus</i>	
Darter Sculpin	<i>Radulinus boleoides</i>	
Big Skate	<i>Raja binoculata</i>	
California Skate	<i>Raja inornata</i>	
Longnose Skate	<i>Raja rhina</i>	
Starry Skate	<i>Raja stellulata</i>	
Stripefin Ronquil	<i>Rathbunella alleni</i>	
Greenland Halibut	<i>Reinhardtius hippoglossoides</i>	
White Suckerfish	<i>Remora albescent</i>	
Whalesucker	<i>Remora australis</i>	
Remora	<i>Remora remora</i>	
Rubberlip Surfperch	<i>Rhacochilus toxotes</i>	
Grunt Sculpin	<i>Rhamphocottus richardsonii</i>	
Shovelnose Guitarfish	<i>Rhinobatos productus</i>	
Blackeye Goby	<i>Rhinogobiops nicholsii</i>	
Kelp Clingfish	<i>Rimicola muscarum</i>	
Northern Ronquil	<i>Ronquilus jordani</i>	
Puget Sound Sculpin	<i>Ruscarius meanyi</i>	
Shining Tubeshoulder	<i>Sagamichthys abei</i>	
Pacific Bonito	<i>Sarda chiliensis</i>	
Pacific Sardine	<i>Sardinops sagax</i>	
Pacific Chub Mackerel	<i>Scomber japonicus</i>	
Longjaw Bigscale	<i>Scopeloberyx robustus</i>	
Twospine Bigscale	<i>Scopelogadus mizolepis</i>	
Cabezon Sculpin	<i>Scorpaenichthys marmoratus</i>	
Graveldiver	<i>Scytalina cerdale</i>	
Rougheye Rockfish	<i>Sebastes aleutianus</i>	
Pacific Ocean Perch	<i>Sebastes alutus</i>	
Kelp Rockfish	<i>Sebastes atrovirens</i>	
Brown Rockfish	<i>Sebastes auriculatus</i>	
Aurora Rockfish	<i>Sebastes aurora</i>	
Redbanded Rockfish	<i>Sebastes babcocki</i>	
Silvergray Rockfish	<i>Sebastes brevispinis</i>	
Gopher Rockfish	<i>Sebastes carnatus</i>	

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
Copper Rockfish	<i>Sebastes caurinus</i>	
Greenspotted rockfish	<i>Sebastes chlorostictus</i>	
Black-and-Yellow Rockfish	<i>Sebastes chrysomelas</i>	
Starry Rockfish	<i>Sebastes constellatus</i>	
Darkblotched Rockfish	<i>Sebastes crameri</i>	
Calico Rockfish	<i>Sebastes dallii</i>	
Splitnose Rockfish	<i>Sebastes diploproa</i>	
Greenstriped Rockfish	<i>Sebastes elongatus</i>	
Swordspine Rockfish	<i>Sebastes ensifer</i>	
Widow Rockfish	<i>Sebastes entomelas</i>	
Pink Rockfish	<i>Sebastes eos</i>	
Yellowtail rockfish	<i>Sebastes flavidus</i>	
Chilipepper	<i>Sebastes goodei</i>	
Rosethorn Rockfish	<i>Sebastes helvomaculatus</i>	
Squarespot Rockfish	<i>Sebastes hopkinsi</i>	
Shortbelly Rockfish	<i>Sebastes jordani</i>	
Cowcod	<i>Sebastes levis</i>	
Quillback Rockfish	<i>Sebastes maliger</i>	
Black Rockfish	<i>Sebastes melanops</i>	
Blackgill Rockfish	<i>Sebastes melanostomus</i>	
Vermilion Rockfish	<i>Sebastes miniatus</i>	
Blue Rockfish	<i>Sebastes mystinus</i>	
China Rockfish	<i>Sebastes nebulosus</i>	
Tiger Rockfish	<i>Sebastes nigrocinctus</i>	
Speckled Rockfish	<i>Sebastes ovalis</i>	
Bocaccio	<i>Sebastes paucispinis</i>	
Chameleon Rockfish	<i>Sebastes phillipsi</i>	
Canary Rockfish	<i>Sebastes pinniger</i>	
Redstripe Rockfish	<i>Sebastes proriger</i>	
Grass Rockfish	<i>Sebastes rastrelliger</i>	
Rosy Rockfish	<i>Sebastes rosaceus</i>	
Greenblotched Rockfish	<i>Sebastes rosenblatti</i>	
Yelloweye Rockfish	<i>Sebastes ruberrimus</i>	
Flag Rockfish	<i>Sebastes rubrivinctus</i>	
Bank Rockfish	<i>Sebastes rufus</i>	
Stripetail Rockfish	<i>Sebastes saxicola</i>	
Halfbanded Rockfish	<i>Sebastes semicinctus</i>	
Olive Rockfish	<i>Sebastes serranoides</i>	
Pygmy Rockfish	<i>Sebastes wilsoni</i>	
Sharpchin Rockfish	<i>Sebastes zacentrus</i>	
Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	
Longspine Thornyhead	<i>Sebastolobus altivelis</i>	
Yellowtail Jack	<i>Seriola lalandi</i>	

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
Queenfish	<i>Seriphus politus</i>	
Sawtooth Snipe Eel	<i>Serrivomer sector</i>	
Pacific Sleeper Shark	<i>Somniosus pacificus</i>	
Pacific Barracuda	<i>Sphyræna argentea</i>	
Night Smelt	<i>Spirinchus starksi</i>	
Longfin Smelt	<i>Spirinchus thaleichthys</i>	SC
Spiny Dogfish	<i>Squalus acanthias</i>	
Pacific Angel Shark	<i>Squatina californica</i>	
Pricklebreast Poacher	<i>Stellerina xyosterna</i>	
Northern Lampfish	<i>Stenobranchius leucopsarus</i>	
Giant Sea Bass	<i>Stereolepis gigas</i>	
Dollar Hatchettfishes	<i>Sternoptyx spp.</i>	
California Needlefish	<i>Strongylura exilis</i>	
California Lanternfish	<i>Symbolophorus californiensis</i>	
California tonguefish	<i>Symphurus atricaudus</i>	
Manacled Sculpin	<i>Synchirus gilli</i>	
Kelp Pipefish	<i>Syngnathus californiensis</i>	
Bay Pipefish	<i>Syngnathus leptorhynchus</i>	
California Lizardfish	<i>Synodus lucioceps</i>	
Longfin Dragonfish	<i>Tactostoma macropus</i>	
Threadfin Slickhead	<i>Talismania bifurcata</i>	
Blue Lanternfish	<i>Tarletonbeania crenularis</i>	
Shortbill Spearfish	<i>Tetrapturus angustirostris</i>	
Smalleye Squaretail	<i>Tetrogonurus cuvieri</i>	
Eulachon	<i>Thaleichthys pacificus</i>	
Walleye Pollock	<i>Theragra chalcogramma</i>	
Albacore	<i>Thunnus alalunga</i>	
Bigeye Tuna	<i>Thunnus obesus</i>	
Pacific Bluefin Tuna	<i>Thunnus orientalis</i>	
Pacific Electric Ray	<i>Torpedo californica</i>	
King-of-the-salmon	<i>Trachipterus altivelis</i>	
Jack Mackerel	<i>Trachurus symmetricus</i>	
Leopard Shark	<i>Triakis semifasciata</i>	
Pacific Sandfish	<i>Trichodon trichodon</i>	
Mexican Lampfish	<i>Triphoturus mexicanus</i>	
Round Stingray	<i>Urolophus halleri</i>	
Blackedge Poacher	<i>Xeneretmus latifrons</i>	
Smootheye Poacher	<i>Xeneretmus leiops</i>	
Bluespotted Poacher	<i>Xeneretmus triacanthus</i>	
Swordfish	<i>Xiphias gladius</i>	
Black Prickleback	<i>Xiphister atropurpureus</i>	
Rock Prickleback	<i>Xiphister mucosus</i>	
Pink Seaperch	<i>Zalembius rosaceus</i>	

Table G-1. Fish and Reptiles Species List

Common Name	Scientific Name	Federal Status
Shortspine Combfish	<i>Zaniolepis frenata</i>	
Longspine Combfish	<i>Zaniolepis latipinnis</i>	
Prowfish	<i>Zaprora silenus</i>	
REPTILES		
Green Sea Turtle	<i>Chelonia mydas</i>	T
Loggerhead Turtle	<i>Caretta caretta</i>	T
Leatherback Turtle	<i>Dermochelys coriacea</i>	E

Table G-2. Birds and Mammals Species List

Common Name	Scientific Name	Federal Status
BIRDS		
Pacific Loon	<i>Gavia pacifica</i>	
Common Loon	<i>Gavia immer</i>	
Pied-billed Grebe*	<i>Podilymbus podiceps</i>	
Horned Grebe	<i>Podiceps auritus</i>	
Red-necked Grebe	<i>Podiceps grisegena</i>	
Eared Grebe	<i>Podiceps nigricollis</i>	
Western Grebe	<i>Aechmophorus occidentalis</i>	
Clark's Grebe	<i>Aechmophorus clarkii</i>	
Laysan Albatross*	<i>Phoebastria immutabilis</i>	
Black-footed Albatross*	<i>Phoebastria nigripes</i>	
Short-tailed Albatross*	<i>Phoebastria albatrus</i>	E
Light-mantled Albatross	<i>Phoebastria palpebrata</i>	
Shy Albatross	<i>Thalassarche cauta</i>	
Northern Fulmar	<i>Fulmarus glacialis</i>	
Pink-footed Shearwater	<i>Puffinus creatopus</i>	
Flesh-footed Shearwater	<i>Puffinus carneipes</i>	
Buller's Shearwater	<i>Puffinus bulleri</i>	
Sooty Shearwater	<i>Puffinus griseus</i>	
Short-tailed Shearwater	<i>Puffinus tenuirostris</i>	
Greater Shearwater	<i>Puffinus gravis</i>	
Black-vented Shearwater	<i>Puffinus opisthomelas</i>	
Manx Shearwater	<i>Puffinus puffinus</i>	
Cook's Petrel	<i>Pterodroma cookii</i>	
Mottled Petrel	<i>Pterodroma inexpectata</i>	
Dark-rumped Petrel	<i>Pterodroma phaeopygia</i>	T
Murphy's Petrel	<i>Pterodroma ultima</i>	
Fork-tailed Storm-Petrel*	<i>Oceanodroma furcata</i>	
Leach's Storm-Petrel*	<i>Oceanodroma leucorhoa</i>	
Ashy Storm-Petrel	<i>Oceanodroma homochroa</i>	
Wilson's Storm-Petrel	<i>Oceanites oceanicus</i>	
Black Storm-Petrel	<i>Oceanodroma melania</i>	
Least Storm-Petrel	<i>Oceanodroma microsoma</i>	
Brown Pelican	<i>Pelecanus occidentalis</i>	D
American White Pelican	<i>Pelecanus erythrorhynchos</i>	
Brandt's Cormorant*	<i>Phalacrocorax penicillatus</i>	
Double-crested Cormorant*	<i>Phalacrocorax auritus</i>	
Pelagic Cormorant*	<i>Phalacrocorax pelagicus</i>	
American Bittern	<i>Botaurus lentiginosus</i>	
Great Blue Heron*	<i>Ardea herodias</i>	
Great Egret*	<i>Ardea alba</i>	
Snowy Egret*	<i>Egretta thula</i>	
Green Heron*	<i>Butorides virescens</i>	

Table G-2. Birds and Mammals Species List

Common Name	Scientific Name	Federal Status
Black-crowned Night-Heron*	<i>Nycticorax nycticorax</i>	
Turkey Vulture*	<i>Cathartes aura</i>	
Canada Goose*	<i>Branta canadensis</i>	D (B.c. leucopareia)
Brant	<i>Branta bernicla</i>	
Gadwall*	<i>Anas strepera</i>	
Eurasian Wigeon	<i>Anas penelope</i>	
American Wigeon	<i>Anas americana</i>	
Mallard*	<i>Anas platyrhynchos</i>	
Blue-winged Teal	<i>Anas discors</i>	
Cinnamon Teal*	<i>Anas cyanoptera</i>	
Northern Shoveler	<i>Anas clypeata</i>	
Northern Pintail	<i>Anas acuta</i>	
Green-winged Teal	<i>Anas crecca</i>	
Greater Scaup	<i>Aythya marila</i>	
Lesser Scaup	<i>Aythya affinis</i>	
Harlequin Duck	<i>Histrionicus histrionicus</i>	
Surf Scoter	<i>Melanitta perspicillata</i>	
Black Scoter	<i>Melanitta nigra</i>	
Long-tailed Duck (Oldsquaw)	<i>Clangula hyemalis</i>	
Bufflehead	<i>Bucephala albeola</i>	
Common Goldeneye	<i>Bucephala clangula</i>	
Red-breasted Merganser	<i>Mergus serrator</i>	
Ruddy Duck*	<i>Oxyura jamaicensis</i>	
Osprey*	<i>Pandion haliaetus</i>	
Bald Eagle*	<i>Haliaeetus leucocephalus</i>	D
Northern Harrier	<i>Circus cyaneus</i>	
Merlin	<i>Falco columbarius</i>	
Peregrine Falcon*	<i>Falco peregrinus</i>	D
Prairie Falcon*	<i>Falco mexicanus</i>	
American Coot*	<i>Fulica americana</i>	
Black-bellied Plover	<i>Pluvialis squatarola</i>	
Snowy Plover*	<i>Charadrius alexandrinus</i>	T
Semipalmated Plover	<i>Charadrius semipalmatus</i>	
Killdeer*	<i>Charadrius vociferus</i>	
Black Oystercatcher*	<i>Haematopus bachmani</i>	
Greater Yellowlegs	<i>Tringa melanoleuca</i>	
Willet	<i>Catoptrophorus semipalmatus</i>	
Wandering Tattler	<i>Heteroscelus incanus</i>	
Spotted Sandpiper	<i>Actitis macularia</i>	
Whimbrel	<i>Numenius phaeopus</i>	
Long-billed Curlew	<i>Numenius americanus</i>	
Marbled Godwit	<i>Limosa fedoa</i>	
Ruddy Turnstone	<i>Arenaria interpres</i>	

Table G-2. Birds and Mammals Species List

Common Name	Scientific Name	Federal Status
Black Turnstone	<i>Arenaria melanocephala</i>	
Surfbird	<i>Aphriza virgata</i>	
Red Knot	<i>Calidris canutus</i>	
Sanderling	<i>Calidris alba</i>	
Western Sandpiper	<i>Calidris mauri</i>	
Least Sandpiper	<i>Calidris minutilla</i>	
Rock Sandpiper	<i>Calidris ptilocnemis</i>	
Dunlin	<i>Calidris alpina</i>	
Short-billed Dowitcher	<i>Limnodromus griseus</i>	
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>	
Red-necked Phalarope	<i>Phalaropus lobatus</i>	
Red Phalarope	<i>Phalaropus fulicaria</i>	
South Polar Skua	<i>Catharacta maccormicki</i>	
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	
Parasitic Jaeger	<i>Stercorarius parasiticus</i>	
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>	
Bonaparte's Gull	<i>Larus philadelphia</i>	
Heermann's Gull	<i>Larus heermanni</i>	
Mew Gull	<i>Larus canus</i>	
Ring-billed Gull*	<i>Larus delawarensis</i>	
California Gull*	<i>Larus californicus</i>	
Herring Gull	<i>Larus argentatus</i>	
Thayer's Gull	<i>Larus thayeri</i>	
Western Gull*	<i>Larus occidentalis</i>	
Glaucous-winged Gull	<i>Larus glaucescens</i>	
Glaucous Gull	<i>Larus hyperboreus</i>	
Sabine's Gull	<i>Xema sabini</i>	
Black-legged Kittiwake	<i>Rissa tridactyla</i>	
Caspian Tern*	<i>Sterna caspia</i>	
Elegant Tern*	<i>Sterna elegans</i>	
Common Tern	<i>Sterna hirundo</i>	
Arctic Tern	<i>Sterna paradisaea</i>	
Forster's Tern*	<i>Sterna forsteri</i>	
Sooty Tern	<i>Sterna fuscata</i>	
Common Murre*	<i>Uria aalge</i>	
Thick-billed Murre	<i>Uria lomvia</i>	
Pigeon Guillemot*	<i>Cepphus columba</i>	
Marbled Murrelet*	<i>Brachyramphus marmoratus</i>	T
Scripps's Murrelet	<i>Synthliboramphus scrippsi</i>	
Ancient Murrelet	<i>Synthliboramphus antiquus</i>	
Cassin's Auklet*	<i>Ptychoramphus aleuticus</i>	
Rhinoceros Auklet*	<i>Cerorhinca monocerata</i>	
Horned Puffin	<i>Fratercula corniculata</i>	

Table G-2. Birds and Mammals Species List

Common Name	Scientific Name	Federal Status
Tufted Puffin*	<i>Fratercula cirrhata</i>	
Short-eared Owl	<i>Asio flammeus</i>	
Belted Kingfisher*	<i>Ceryle alcyon</i>	
Black Phoebe*	<i>Sayornis nigricans</i>	
Say's Phoebe	<i>Sayornis saya</i>	
Common Raven*	<i>Corvus corax</i>	
Horned Lark*	<i>Eremophila alpestris</i>	
Tree Swallow*	<i>Tachycineta bicolor</i>	
Northern Rough-winged Swallow*	<i>Stelgidopteryx serripennis</i>	
Cliff Swallow*	<i>Petrochelidon pyrrhonota</i>	
Barn Swallow*	<i>Hirundo rustica</i>	
Rock Wren*	<i>Salpinctes obsoletus</i>	
Marsh Wren	<i>Cistothorus palustris</i>	
American Pipit	<i>Anthus rubescens</i>	
Yellow-rumped Warbler	<i>Dendroica coronata</i>	
Savannah Sparrow*	<i>Passerculus sandwichensis</i>	
Song Sparrow*	<i>Melospiza melodia</i>	
Red-winged Blackbird*	<i>Agelaius phoeniceus</i>	
Tricolored Blackbird*	<i>Agelaius tricolor</i>	
Western Meadowlark*	<i>Sturnella neglecta</i>	
MAMMALS		
Blue Whale	<i>Balaenoptera musculus</i>	E
Fin Whale	<i>Balaenoptera physalus</i>	E
Minke Whale	<i>Balaenoptera acutorostrata</i>	
Humpback Whale	<i>Megaptera novaeangliae</i>	E
Gray Whale	<i>Eschrichtius robustus</i>	D
Harbor Porpoise*	<i>Phocoena phocoena</i>	
Dall's Porpoise*	<i>Phocoenoides dalli</i>	
Pacific White-sided Dolphin*	<i>Lagenorhynchus obliquidens</i>	
Northern Right Whale Dolphin*	<i>Lissodelphis borealis</i>	
Striped Dolphin	<i>Stenella coeruleoalba</i>	
Risso's Dolphin*	<i>Grampus griseus</i>	
Killer Whale*	<i>Orcinus orca</i>	E**
Short-finned Pilot Whale	<i>Globicephala macrorhynchus</i>	
Sperm Whale	<i>Physeter macrocephalus</i>	E
Cuvier's Beaked Whale	<i>Ziphius cavirostris</i>	
Baird's Beaked Whale*	<i>Berardius bairdii</i>	
Steller Sea Lion*	<i>Eumetopius jubatus</i>	***
California Sea Lion	<i>Zalophus californianus</i>	
Northern Fur Seal	<i>Callorhinus ursinus</i>	
Guadalupe Fur Seal	<i>Arctocephalus townsendi</i>	T
Northern Elephant Seal	<i>Mirounga angustirostris</i>	
Harbor Seal*	<i>Phoca vitulina richardii</i>	

Table G-2. Birds and Mammals Species List

Common Name	Scientific Name	Federal Status
Southern Sea Otter	<i>Enhydra lutris nereis</i>	T
River Otter*	<i>Lontra canadensis</i>	

* Denotes use of sanctuary for foraging, roosting, nesting, and/or rearing of young during breeding season.

** In 2006, the Distinct Population Segment of southern killer whales (*Orcinus orca*) was designated as Endangered under the MMPA and ESA. Recent anecdotal information suggests that some of the migratory and feeding killer whales within the GFNMS, CBNMS and MBNMS may be part of this DPS and therefore have been noted as Endangered in the species inventory.

*** Critical habitat for Steller sea lions includes the rookeries at Año Nuevo Island within the MBNMS and South Farallon Islands within the GFNMS (see 50 CFR 226.202(b) and Table 1 to Part 226).

Table G-3. Invertebrates Species List

Common Name	Scientific Name
MONERA	
Bacterial mat	<i>Beggiotoa</i>
PORIFERA	
Red volcano sponge	<i>Acanus erithacus</i>
Sponge	<i>Antho lithophoenix</i>
Glass sponge	<i>Aphrocallistes vastus</i>
Sponge	<i>Aplysilla glacialis</i>
Sponge	<i>Aplysilla polyraphis</i>
Predatory sponges	<i>Asbestopluma</i>
Sponge	<i>Clathria (Microciona) spongigartina</i>
Sponge	<i>Clathria (Thalysias) originalis</i>
Sponge	<i>Clathria microjoanna</i>
Sponge	<i>Clathria spongigartina</i>
Sponge	<i>Dysidea fragilis</i>
Sponge	<i>Endectyon hyle</i>
Sponge	<i>Forcepia (Forcepia) elvini</i>
Sponge	<i>Geodia agassizi</i>
Sponge	<i>Geodia gibberosa</i>
Sponge	<i>Geodia mesotriaena</i>
Sponge	<i>Guitarra abbotti</i>
Bread crumb sponge	<i>Halichondria panicea</i>
Sponge	<i>Haliclona textapatina</i>
Glass sponge	<i>Heterochone calyx</i>
Sponge	<i>Hymeniacidon sinapium</i>
Sponge	<i>Iophon lamella</i>
Sponge	<i>Iophon nigricans</i>
Sponge	<i>Leucandra heathi</i>
Sponge	<i>Leucandra losangelensis</i>
Sponge	<i>Leucilla nuttingi</i>
Sponge	<i>Leucosolenia eleanor</i>
Sponge	<i>Lissodendoryx (Lissodendoryx) topsenti</i>
Sponge	<i>Lissodendoryx firma</i>
Sponge	<i>Lissodendoryx kyma</i>
Sponge	<i>Mycale adhaerens</i>
Sponge	<i>Mycale lingua</i>
Sponge	<i>Mycale psila</i>
Sponge	<i>Mycale toporoki</i>
Sponge	<i>Myxilla incrustans</i>
Sponge	<i>Myxilla parasitica</i>
Sponge	<i>Neopetrosia problematica</i>
Sponge	<i>Neopetrosia zumi</i>
Sponge	<i>Penares cortius</i>
Sponge	<i>Poecillastra rickettsi</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Aggregate vase sponge	<i>Polymastia pachymastia</i>
Sponge	<i>Sidonops bicolor</i>
Gray moon sponge	<i>Spheciospongia confoederata</i>
Glass sponge	<i>Staurocalyptus fasciculatus</i>
White sponge	<i>Stelletta clarella</i>
Sponge	<i>Stelletta estrella</i>
Sponge	<i>Tedania gurjanovae</i>
Sponge	<i>Tethya aurantium</i>
Sponge	<i>Tethya californiana</i>
Sponge	<i>Xestospongia diprosopia</i>
Sponge	<i>Xestospongia edapha</i>
CNIDARIA	
Anemone	<i>Actinauge verrilli</i>
Siphonophore	<i>Agalma elegans</i>
Pink helmet	<i>Aglantha digitale</i>
thecate hydroids	<i>Aglaophenia inconspicua</i>
Thecate hydroids	<i>Aglaophenia latirostris</i>
Jellyfish	<i>Aglaura hemistoma</i>
Siphonophore	<i>Amphicaryon ernesti</i>
Mushroom coral	<i>Anthomastus ritteri</i>
Anemone	<i>Anthopleura artemisia</i>
Aggregating anemone	<i>Anthopleura elegantissima</i>
Starburst anemone	<i>Anthopleura sola</i>
Giant green anemone	<i>Anthopleura xanthogrammica</i>
Sea pen	<i>Anthoptilum grandiflorum</i>
Moon jelly	<i>Aurelia aurita</i>
Orange cup coral	<i>Balanophyllia elegans</i>
Cup coral	<i>Caryophyllia alaskensis</i>
Cup coral	<i>Caryophyllia arnoldi</i>
Siphonophore	<i>Chelophyes appendiculata</i>
Soft coral	<i>Chromoplexaura marki</i>
Purple-striped jelly	<i>Chrysaora colorata</i>
Pacific sea nettle	<i>Chrysaora fuscescens</i>
Northern Sea nettle	<i>Chrysaora melanaster</i>
Siphonophore	<i>Chuniphyes multidentata</i>
Thecate hydroids	<i>Clytia gregaria</i>
Cup coral	<i>Coenocyathus bowersi</i>
Silky medusa	<i>Colobonema sericeum</i>
Strawberry anemone	<i>Corynactis californica</i>
Lion's mane	<i>Cyanea capillata</i>
Cup coral	<i>Desmophyllum dianthus</i>
Siphonophore	<i>Diphyes bojani</i>
Siphonophore	<i>Diphyes dispar</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Siphonophore	<i>Dromalia alexandri</i>
Thecate hydroids	<i>Earleria cellularia</i>
Proliferating anemone	<i>Epiactis prolifera</i>
Orange zoanthid	<i>Epizoanthus scotinus</i>
Siphonophore	<i>Eudoxoides mitra</i>
Thecate hydroids	<i>Eutonina indicans</i>
Orange hydroid	<i>Garveia annulata</i>
Sea pen	<i>Halopteris californica</i>
Cup coral	<i>Javania californica</i>
Cup coral	<i>Labyrinthocyathus quaylei</i>
Red gorgonian	<i>Leptogorgia chilensis</i>
Tentacle shedding anemone	<i>Liponema brevicornis</i>
Jellyfish	<i>Liriope tetrphylla</i>
White plumed anemone	<i>Metridium farcimen</i>
Clonal plumose anemone	<i>Metridium senile</i>
Siphonophore	<i>Muggiaea atlantica</i>
Siphonophore	<i>Nanomia bijuga</i>
Coral	<i>Oculina profunda</i>
Anemone	<i>Paractinostola faeculenta</i>
Cup coral	<i>Paracyathus stearnsii</i>
Bubblegum coral	<i>Paragorgia arborea</i>
Primnoid corals	<i>Parastenella</i>
Purple-striped jelly	<i>Pelagia colorata</i>
Crown jellyfish	<i>Periphylla periphylla</i>
Primnoid coral	<i>Plumarella longispina</i>
Sea pen	<i>Ptilosarcus gurneyi</i>
Siphonophore	<i>Sphaeronectes gracilis</i>
Hydrozoan coral	<i>Stylanthea papillosa</i>
Lace coral	<i>Stylanthea porphyra</i>
California hydrocoral	<i>Stylaster californicus</i>
Lace coral	<i>Stylaster venustus</i>
Sea pen	<i>Stylatula gracilis</i>
Siphonophore	<i>Sulculeolaria biloba</i>
Red gorgonian coral	<i>Swiftia kofoidi</i>
Jellyfish	<i>Tetraplatia volitans</i>
Northern red anemone	<i>Urticina felina</i>
Anemone	<i>Urticina lofotensis</i>
Fish-eating anemone	<i>Urticina piscivora</i>
By-the-wind sailor	<i>Velella velella</i>
Siphonophore	<i>Vogtia pentacantha</i>
ANNELIDA	
Polychaete worm	<i>Arabella iricolor</i>
Polychaete worm	<i>Arctonoe fragilis</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Polychaete worm	<i>Arctonoe vittata</i>
Polychaete worm	<i>Bispira volutacornis</i>
Polychaete worm	<i>Dodecaceria fewkesi</i>
Polychaete worm	<i>Eudistylia polymorpha</i>
Polychaete worm	<i>Eulalia bilineata</i>
Polychaete worm	<i>Eunice multipectinata</i>
Polychaete worm	<i>Eunice vittata</i>
Polychaete worm	<i>Eunoe barbata</i>
Polychaete worm	<i>Eunoe senta</i>
Polychaete worm	<i>Euphrosine arctia</i>
Polychaete worm	<i>Euphrosine dumosa</i>
Polychaete worm	<i>Ficopomatus enigmaticus</i>
Polychaete worm	<i>Genetyllis castanea</i>
Polychaete worm	<i>Glycera tessellata</i>
Polychaete worm	<i>Halosydna brevisetosa</i>
Polychaete worm	<i>Harmothoe extenuata</i>
Polychaete worm	<i>Harmothoe fragilis</i>
Polychaete worm	<i>Harmothoe hirsuta</i>
Polychaete worm	<i>Lepidasthenia longicirrata</i>
Polychaete worm	<i>Lepidonotus caelorus</i>
Polychaete worm	<i>Lepidonotus spiculus</i>
Polychaete worm	<i>Lepidonotus squamatus</i>
Polychaete worm	<i>Lumbrineris inflata</i>
Polychaete worm	<i>Lumbrineris japonica</i>
Polychaete worm	<i>Lumbrineris latreilli</i>
Polychaete worm	<i>Nereiphylla castanea</i>
Polychaete worm	<i>Nereis eakini</i>
Polychaete worm	<i>Nereis grubei</i>
Polychaete worm	<i>Nereis pelagica</i>
Polychaete worm	<i>Pholoides asperus</i>
Polychaete worm	<i>Phyllochaetopterus prolifica</i>
Polychaete worm	<i>Platynereis magalhaensis</i>
Polychaete worm	<i>Polydora alloporis</i>
Polychaete worm	<i>Rhynchonerella angelini</i>
Polychaete worm	<i>Serpula columbiana</i>
Polychaete worm	<i>Serpula vermicularis</i>
Polychaete worm	<i>Sige bifoliata</i>
Polychaete worm	<i>Spirorbis spirorbis</i>
Polychaete worm	<i>Syllis armillaris</i>
Polychaete worm	<i>Thelepus crispus</i>
Polychaete worm	<i>Tomopteris cavalli</i>
Polychaete worm	<i>Tomopteris pacifica</i>
Polychaete worm	<i>Tomopteris septentrionalis</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Polychaete worm	<i>Trypanosyllis aeolis</i>
Polychaete worm	<i>Trypanosyllis intermedia</i>
Polychaete worm	<i>Vanadis longissima</i>
MOLLUSCA	
Squid	<i>Abraliopsis felis</i>
Divaricate nutclam	<i>Acila castrensis</i>
Corded white limpet	<i>Acmaea funiculata</i>
Whitecap limpet	<i>Acmaea mitra</i>
Harp baby-bubble	<i>Acteocina harpa</i>
Gastropod	<i>Alvania almo</i>
Gastropod	<i>Alvania compacta</i>
Gastropod	<i>Alvania dinora</i>
Santa Rosa alvania	<i>Alvania purpurea</i>
Gastropod	<i>Alvania rosana</i>
Two-tone amphissa	<i>Amphissa bicolor</i>
Wrinkled amphissa	<i>Amphissa columbiana</i>
Variegated amphissa	<i>Amphissa versicolor</i>
Lyre scissurelle	<i>Anatoma lyra</i>
Pacific sea-lemon	<i>Anisodoris nobilis</i>
Peruvian jingle	<i>Anomia peruviana</i>
Bivalve	<i>Argopecten irradians concentricus</i>
Nudibranch	<i>Armina cordellensis</i>
Acute barleynail	<i>Barleeia acuta</i>
Gastropod	<i>Barleeia haliotiphila</i>
Gastropod	<i>Barleeia subtenuis</i>
Gastropod	<i>Bathybembix bairdii</i>
Magister armhook squid	<i>Berryteuthis magister</i>
California side gill slug	<i>Berthella californica</i>
Gastropod	<i>Bittium alternatum</i>
Ribbed trophon	<i>Boreotrophon multicostatus</i>
Turban whelk	<i>Buccinum viridum</i>
Yellow-edged nudibranch	<i>Cadlina luteomarginata</i>
Modest cadlina	<i>Cadlina modesta</i>
California caecum	<i>Caecum californicum</i>
Many-named caecum	<i>Caecum crebricinctum</i>
Western caecum	<i>Caecum occidentale</i>
Purple-ring topsnail	<i>Calliostoma annulatum</i>
Channeled topsnail	<i>Calliostoma canaliculatum</i>
Blue topsnail	<i>Calliostoma ligatum</i>
Granulose topsnail	<i>Calliostoma supragranosum</i>
Chiton	<i>Callistochiton palmulatus</i>
Gastropod	<i>Cancellaria cooperii</i>
Gastropod	<i>Carinaria japonica</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Three-tooth cavoline	<i>Cavolinia tridentata</i>
Foliate thornmouth	<i>Ceratostoma foliatum</i>
Secret jewelbox	<i>Chama arcana</i>
California venus	<i>Chione californiensis</i>
Squid	<i>Chiroteuthis calyx</i>
Squid	<i>Chiroteuthis veranyi</i>
Spiny scallop	<i>Chlamys hastata</i>
Reddish scallop	<i>Chlamys rubida</i>
Gastropod	<i>Clathromangalia interfossa</i>
Pyramid clio	<i>Clio pyramidata</i>
Sea angel	<i>Clione limacina</i>
Yellow limpet	<i>Collisella ochracea</i>
Oblique whelk	<i>Colus aphelus</i>
Gastropod	<i>Colus trophius</i>
Atlantic corolla	<i>Corolla calceola</i>
Spectacular corolla	<i>Corolla spectabilis</i>
Hood puncturella	<i>Cranopsis cucullata</i>
Giant rock-scallop	<i>Crassadoma gigantea</i>
Cross-sculpture crenella	<i>Crenella decussata</i>
Hooked slipper snail	<i>Crepidula adunca</i>
Western white slipper snail	<i>Crepidula perforans</i>
Pacific half-slippersnail	<i>Crepidatella lingulata</i>
Gumboot chiton	<i>Cryptochiton stelleri</i>
California softshell clam	<i>Cryptomya californica</i>
Bumpy cyclocardia	<i>Cyclocardia bailyi</i>
Stout cyclocardia	<i>Cyclocardia ventricosa</i>
Santa Barbara glass-scallop	<i>Cyclopecten barbarensis</i>
Gastropod	<i>Cymakra aspera</i>
Gastropod	<i>Cymakra gracilior</i>
Bivalve	<i>Delectopecten tillamookensis</i>
Vancouver scallop	<i>Delectopecten vancouverensis</i>
Gastropod	<i>Desmopterus papilio</i>
California paperbubble	<i>Diaphana californica</i>
Ringed doris	<i>Diaulula sandiegensis</i>
Neat-rib keyhole limpet	<i>Diodora arnoldi</i>
Rough keyhole limpet	<i>Diodora aspera</i>
Orb diplodon	<i>Diplodonta orbella</i>
Painted nudibranch	<i>Dirona picta</i>
Gastropod	<i>Dolichupis ritteri</i>
Humbolt squid	<i>Dosidicus gigas</i>
Gastropod	<i>Epitonium indianorum</i>
Gastropod	<i>Epitonium tinctum</i>
Appleseed erato	<i>Erato vitellina</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Gastropod	<i>Euspira lewisii</i>
Spanish shawl	<i>Flabellina iodinea</i>
Nudibrachn	<i>Flabellina trilineata</i>
Painted spindle	<i>Fusinus luteopictus</i>
Oregon triton	<i>Fusitriton oregonensis</i>
Squid	<i>Galiteuthis phyllura</i>
California sunsetclam	<i>Gari californica</i>
Gritty doris	<i>Geitodoris heathi</i>
Triangular marginella	<i>Gibberula subtrigona</i>
Ford venus	<i>Globivenus fordii</i>
California bittersweet	<i>Glycymeris subobsoleta</i>
Gastropod	<i>Glyphostoma canfieldi</i>
Squid	<i>Gonatopsis borealis</i>
Clawed armhook squid	<i>Gonatus onyx</i>
Pear marginella	<i>Granulina margaritula</i>
Chenu mussel	<i>Gregariella chenui</i>
Black abalone	<i>Haliotis cracherodii</i>
Pinto abalone	<i>Haliotis kamtschatkana</i>
Red abalone	<i>Haliotis rufescens</i>
Chiton	<i>Hanleyella oldroydi</i>
Hermisenda	<i>Hermisenda crassicornis</i>
Pigeon erato	<i>Hespererato columbella</i>
Arctic hiatella	<i>Hiatella arctica</i>
Squid	<i>Histioteuthis hoylei</i>
Berry dwarf-turban	<i>Homalopoma baculum</i>
Gastropod	<i>Homalopoma berryi</i>
Gastropod	<i>Homalopoma lacunatum</i>
Dark dwarf-turban	<i>Homalopoma luridum</i>
Gastropod	<i>Homalopoma mimicum</i>
Few-rib dwarf-turban	<i>Homalopoma paucicostatum</i>
Rayed dwarf-turban	<i>Homalopoma radiatum</i>
Kennerley venus	<i>Humilaria kennerleyi</i>
Gastropod	<i>Iothia lindbergi</i>
Lamellar venus	<i>Irusella lamellifera</i>
Black leather chiton	<i>Katharina tunicata</i>
Suborbicular kellyclam	<i>Kellia suborbicularis</i>
Gastropod	<i>Kurtziella beta</i>
Chink snail	<i>Lacuna marmorata</i>
Gastropod	<i>Lacuna porrecta</i>
Gastropod	<i>Lacuna unifasciata</i>
San Diego lamellaria	<i>Lamellaria diegoensis</i>
Bivalve	<i>Lasaea subviridis</i>
San Diego scallop	<i>Leopecten diegensis</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Chiton	<i>Lepidochitona flectens</i>
Chiton	<i>Lepidozona radians</i>
Chiton	<i>Lepidozona retiporosa</i>
Chiton	<i>Lepidozona scabricostata</i>
Chiton	<i>Lepidozona willetti</i>
Chiton	<i>Leptochiton alveolus</i>
Chiton	<i>Leptochiton belknapii</i>
Chiton	<i>Leptochiton rugatus</i>
Pacific littleneck clam	<i>Leukoma staminea</i>
Helicid pteropod	<i>Limacina helicina</i>
Hemphill fileclam	<i>Limaria hemphilli</i>
Gastropod	<i>Lirobittium purpureum</i>
Sharp-rib lirularia	<i>Lirularia acuticostata</i>
Few-spot lirularia	<i>Lirularia parvipicta</i>
Feather datemussel	<i>Lithophaga plumula</i>
Periwinkle	<i>Littorina keenae</i>
Checkered periwinkle	<i>Littorina scutulata</i>
Periwinkle	<i>Littorina sitkana</i>
California market squid	<i>Loligo opalescens</i>
Black limpet	<i>Lottia asmi</i>
Ribbed limpet	<i>Lottia digitalis</i>
Owl limpet	<i>Lottia gigantea</i>
Limpet	<i>Lottia insessa</i>
Unstable seaweed limpet	<i>Lottia instabilis</i>
File limpet	<i>Lottia limatula</i>
Shield limpet	<i>Lottia pelta</i>
Limpet	<i>Lottia persona</i>
Rough limpet	<i>Lottia scabra</i>
Limpet	<i>Lottia scutum</i>
Limpet	<i>Lottia strigatella</i>
Triangular limpet	<i>Lottia triangularis</i>
Bivalve	<i>Lucinoma annulata</i>
Farallon cyclostreme	<i>Macrarene farallonensis</i>
California macromphaline	<i>Macromphalina californica</i>
Pacific rosy margarite	<i>Margarites rhodia</i>
Salmon margarite	<i>Margarites salmoneus</i>
Gastropod	<i>Megatebennus bimaculatus</i>
Auburn eulima	<i>Melanella rutila</i>
Gastropod	<i>Melanella thersites</i>
Gastropod	<i>Metaxia convexa</i>
Short baby-bubble	<i>Microglyphis brevicula</i>
Tiny pouchclam	<i>Milneria minima</i>
Elongate carditid	<i>Miodontiscus prolongatus</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Half-pitted miter	<i>Mitra idae</i>
Variegated dovesnail	<i>Mitrella tuberosa</i>
Gastropod	<i>Mitromorpha gracilior</i>
Fat horse mussel	<i>Modiolus capax</i>
California horse mussel	<i>Modiolus carpenteri</i>
Bag horse mussel	<i>Modiolus sacculifer</i>
Nudibranch	<i>Monterea nobilis</i>
Hairy chiton	<i>Mopalia ciliata</i>
Chiton	<i>Mopalia egretta</i>
Chiton	<i>Mopalia imbecilis</i>
Mossy chiton	<i>Mopalia muscosa</i>
Robust clubhook squid	<i>Moroteuthis robusta</i>
Pygmy mussel	<i>Musculus pygmaeus</i>
California mussel	<i>Mytilus californianus</i>
California mussel	<i>Mytilus zonarius</i>
Smooth western nassa	<i>Nassarius insculptus</i>
Gastropod	<i>Nassarius mendicus</i>
Hundred-line cockle	<i>Nemocardium centifilum</i>
Gastropod	<i>Neptunea amianta</i>
Channelled dog whelk	<i>Nucella canaliculata</i>
Emarginate dog whelk	<i>Nucella emarginata</i>
Chiton	<i>Nuttallina californica</i>
Purple rocksnail	<i>Ocenebrina atropurpurea</i>
Gastropod	<i>Ocenebrina interfossa</i>
Lurid rocksnail	<i>Ocenebrina lurida</i>
Squid	<i>Octopoteuthis deletron</i>
North Pacific bigeye octopus	<i>Octopus californicus</i>
North Pacific giant octopus	<i>Octopus dofleini</i>
Smoothskin octopus	<i>Octopus leioderma</i>
East Pacific red octopus	<i>Octopus rubescens</i>
Nudibranch	<i>Okenia rosacea</i>
Beatic dwarf olive	<i>Olivella baetica</i>
Red flying squid	<i>Ommastrephes bartramii</i>
Leather limpet	<i>Onchidella borealis</i>
Boreal clubhook squid	<i>Onychoteuthis borealijaponicus</i>
Gastropod	<i>Opalia wroblewskyi</i>
Octopus	<i>Opisthoteuthis californiana</i>
Sharp-rib cyclostreme	<i>Parviturbo acuticostatus</i>
California pedicularia	<i>Pedicularia californica</i>
Bivalve	<i>Penitella conradi</i>
Monterey wormsnail	<i>Petalonchus montereyensis</i>
California petricolid	<i>Petricola californiensis</i>
Bivalve	<i>Petricola carditoides</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Bivalve	<i>Philobrya setosa</i>
Chiton	<i>Placiphorella atlantica</i>
Gastropod	<i>Pleurobranchaea californica</i>
Alaska jingle	<i>Pododesmus macrochisma</i>
Red turban	<i>Pomaulax gibberosus</i>
Pacific jewelbox	<i>Pseudochama exogyra</i>
Deep jewelbox	<i>Pseudochama granti</i>
Frill-wing murex	<i>Pteropurpura macroptera</i>
Hood puncturella	<i>Puncturella cucullata</i>
Dot-rib puncturella	<i>Puncturella punctocostata</i>
Gastropod	<i>Rictaxis punctocaelatus</i>
Gastropod	<i>Rissoina hannai</i>
Gastropod	<i>Rissoina newcombei</i>
North Pacific bobtail squid	<i>Rossia pacifica</i>
Elegant emarginula	<i>Scelidotoma bella</i>
Gastropod	<i>Seila montereyensis</i>
Rose-painted semele	<i>Semele rubropicta</i>
Sharp-rib semele	<i>Semele venusta</i>
Scaled wormsnailed	<i>Serpulorbis squamiger</i>
Rim scissurelle	<i>Sinezona rimuloides</i>
Lovely pacific solarelle	<i>Solariella peramabilis</i>
Brown turban snail	<i>Tegula brunnea</i>
Black tegula	<i>Tegula funebris</i>
Lined chiton	<i>Tonicella lineata</i>
Lined chiton	<i>Tonicella lokii</i>
Fat gaper	<i>Tresus capax</i>
Reticulate button snail	<i>Trimusculus reticulatus</i>
Clown nudibranch	<i>Triopha catalinae</i>
Speckled nudibranch	<i>Triopha maculata</i>
San Pedro triphora	<i>Triphora pedroana</i>
Rosy tritonia	<i>Tritonia diomedea</i>
California trivia	<i>Trivia californiana</i>
Gastropod	<i>Trivia ritteri</i>
Gastropod	<i>Trophonopsis stuarti</i>
Vampire squid	<i>Vampyroteuthis infernalis</i>
Granular lamellaria	<i>Velutina granulata</i>
Smooth lamellaria	<i>Velutina velutina</i>
Shield false limpet	<i>Williamia peltoides</i>
ARTHROPODA	
Spiny lithode crab	<i>Acantholithodes hispidus</i>
Mysid shrimp	<i>Acanthomysis</i>
Copepod	<i>Acartia danae</i>
Copepod	<i>Acartia hudsonica</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Copepod	<i>Acartia longiremis</i>
Copepod	<i>Acartia tonsa</i>
Sea spider	<i>Achelia chelata</i>
Sea spider	<i>Achelia spinoseta</i>
Copepod	<i>Aetideus bradyi</i>
Copepod	<i>Aetideus divergens</i>
Mysid shrimp	<i>Alienacanthomysis macropsis</i>
Twistclaw pistol shrimp	<i>Alpheus clamator</i>
Shrimp	<i>Alpheus dentipes</i>
Sea spider	<i>Ammonothea hilgendorfi</i>
Barnacle	<i>Amphibalanus amphitrite</i>
Copepod	<i>Arietellus plumifer</i>
Copepod	<i>Arietellus setosus</i>
Barnacles	<i>Armatobalanus nefrens</i>
Copepod	<i>Augaptilus glacialis</i>
Barnacle	<i>Balanus glandula</i>
Barnacles	<i>Balanus nubilus</i>
Burkenroad blunt-tail shrimp	<i>Bentheogennema burkenroadi</i>
Spiny mole crab	<i>Blepharipoda occidentalis</i>
Amphipod	<i>Brachyscelus cruscum</i>
Copepod	<i>Bradyidius similis</i>
Copepod	<i>Calanus marshallae</i>
Copepod	<i>Calanus pacificus</i>
Copepod	<i>Caligus clemensi</i>
Copepod	<i>Caligus macarovi</i>
Copepod	<i>Calocalanus pavo</i>
Copepod	<i>Calocalanus pavoninus</i>
Copepod	<i>Calocalanus styliremis</i>
Pacific rock crab	<i>Cancer antennarius</i>
Dungeness crab	<i>Cancer magister</i>
Pygmy rock crab	<i>Cancer oregonensis</i>
Red rock crab	<i>Cancer productus</i>
Copepod	<i>Candacia bipinnata</i>
Copepod	<i>Candacia columbiae</i>
Skeleton shrimp	<i>Caprella californica</i>
Green crab	<i>Carcinus maenas</i>
Copepod	<i>Centropages abdominalis</i>
Copepod	<i>Centropages bradyi</i>
Grooved Tanner crab	<i>Chionoecetes tanneri</i>
Longhorn decorator crab	<i>Chorilia longipes</i>
Barnacle	<i>Chthamalus dalli</i>
Isopod	<i>Cirolana harfordi</i>
Copepod	<i>Clausocalanus arcuicornis</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Copepod	<i>Clausocalanus furcatus</i>
Copepod	<i>Clausocalanus lividus</i>
Copepod	<i>Clausocalanus parapergens</i>
Ostracod	<i>Conchoecetta acuminata</i>
Ostracod	<i>Conchoecia macrocheira</i>
Ostracod	<i>Conchoecia magna</i>
Ostracod	<i>Conchoecilla daphnoides</i>
Copepod	<i>Corycaeus anglicus</i>
Copepod	<i>Corycaeus flaccus</i>
Bay shrimp	<i>Crangon nigromaculata</i>
Copepod	<i>Ctenocalanus vanus</i>
Ostracod	<i>Discoconchoecia elegans</i>
Amphipod	<i>Elasmopus antennatus</i>
Amphipod	<i>Elasmopus serraticus</i>
Pacific sand crab	<i>Emerita analoga</i>
Copepod	<i>Epilabidocera amphitrites</i>
Striped eualid	<i>Eualus lineatus</i>
Copepod	<i>Eucalanus bungii</i>
Copepod	<i>Eucalanus californicus</i>
Copepod	<i>Eucalanus hyalinus</i>
Copepod	<i>Euchaeta elongata</i>
Copepod	<i>Euchaeta media</i>
Copepod	<i>Euchirella curticauda</i>
Copepod	<i>Euchirella grandicornis</i>
Copepod	<i>Euchirella pseudopulchra</i>
Copepod	<i>Euchirella rostrata</i>
Krill	<i>Euphausia pacifica</i>
Krill	<i>Euphausia recurva</i>
Isopod	<i>Exosphaeroma inornata</i>
Grooved mussel crab	<i>Fabia subquadrata</i>
Copepod	<i>Gaetanus minor</i>
Copepod	<i>Gaetanus pungens</i>
Copepod	<i>Haloptilus longicornis</i>
Furry crab	<i>Hapalogaster cavicauda</i>
Purple shore crab	<i>Hemigrapsus nudus</i>
Barred shrimp	<i>Heptacarpus pugettensis</i>
Slender coastal shrimp	<i>Heptacarpus tenuissimus</i>
Copepod	<i>Heterorhabdus papilliger</i>
Copepod	<i>Heterorhabdus tanneri</i>
Copepod	<i>Heterostylites longicornis</i>
Mysid shrimp	<i>Holmesiella anomala</i>
Amphipod	<i>Hyale grandicornis</i>
Amphipod	<i>Hyperia medusarum</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Amphipod	<i>Hyperoche mediterranea</i>
Amphipod	<i>Hyperoche medusarum</i>
Isopod	<i>Ianiropsis kincaidi</i>
Isopod	<i>Idotea fewkesi</i>
Isopod	<i>Idotea urotoma</i>
Mysid shrimp	<i>Inusitatomysis insolita</i>
Isopod	<i>Janiralata occidentalis</i>
Isopod	<i>Joeropsis dubia</i>
Tanaid	<i>Leptochelia savignyi</i>
Amphipod	<i>Leucothoe spinicarpa</i>
Isopod	<i>Ligia occidentalis</i>
Isopod	<i>Ligia pallasii</i>
Isopod	<i>Limnoria algarum</i>
Scarlet king crab	<i>Lithodes couesi</i>
Isopod	<i>Littorophiloscia richardsonae</i>
Brown box crab	<i>Lopholithodes foraminatus</i>
Blackclaw crestleg crab	<i>Lophopanopeus bellus</i>
Crab	<i>Lophopanopeus leucomanus</i>
Copepod	<i>Lophothrix frontalis</i>
Moss crab	<i>Loxorhynchus crispatus</i>
Sheep crab	<i>Loxorhynchus grandis</i>
Copepod	<i>Lucicutia flavicornis</i>
Copepod	<i>Lucicutia longicornis</i>
Amphipod	<i>Lycaea pulex</i>
Copepod	<i>Mecynocera tenuis</i>
Barnacle	<i>Megabalanus californicus</i>
Copepod	<i>Mesocalanus tenuicornis</i>
Copepod	<i>Metridia pacifica</i>
Ostracod	<i>Mikroconchoecia acuticosta</i>
Squat lobster	<i>Munida quadrispina</i>
Isopod	<i>Munna spinifrons</i>
Isopod	<i>Munna stephenseni</i>
Krill	<i>Nematobrachion flexipes</i>
Krill	<i>Nematoscelis difficilis</i>
Copepod	<i>Neocalanus cristatus</i>
Copepod	<i>Neocalanus plumchrus</i>
Krill	<i>Nyctiphanes simplex</i>
Sea spider	<i>Nymphopsis spinosissimum</i>
Decapod	<i>Oedignathus inermis</i>
Copepod	<i>Oithona atlantica</i>
Copepod	<i>Oithona similis</i>
Amphipod	<i>Oligochinus lighti</i>
Amphipod	<i>Opisa tridentata</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Graceful decorator crab	<i>Oregonia gracilis</i>
Ostracod	<i>Orthoconchoecia striola</i>
Amphipod	<i>Oxycephalus clausi</i>
Left handed hermit crab	<i>Paguristes ulreyi</i>
Knobbyhand hermit	<i>Pagurus confragosus</i>
Hermit crab	<i>Pagurus hirsutiusculus</i>
Hermit crab	<i>Pagurus samoensis</i>
Sidestriped shrimp	<i>Pandalopsis dispar</i>
Dock shrimp	<i>Pandalus danae</i>
Humpy shrimp	<i>Pandalus goniurus</i>
Coonstriped shrimp	<i>Pandalus hypsinotus</i>
Ocean shrimp	<i>Pandalus jordani</i>
Spot shrimp	<i>Pandalus platyceros</i>
Roughpatch shrimp	<i>Pandalus stenolepis</i>
Yellowleg pandalid	<i>Pandalus tridens</i>
Copepod	<i>Paracalanus indicus</i>
Copepod	<i>Paracalanus parvus</i>
Isopod	<i>Paracerceis cordata</i>
California king crab	<i>Paralithodes californiensis</i>
Spiny king crab	<i>Paralithodes rathbuni</i>
Amphipod	<i>Parallorchestes ochotensis</i>
Amphipod	<i>Paraphronima crassipes</i>
Amphipod	<i>Paraphronima gracilis</i>
Copepod	<i>Pareucalanus parki</i>
Pacific glass shrimp	<i>Pasiphaea pacifica</i>
Crimson pasiphaeid	<i>Pasiphaea tarda</i>
Isopod	<i>Pentidotea resecata</i>
Isopod	<i>Pentidotea stenops</i>
Isopod	<i>Pentidotea wosnesenskii</i>
Amphipod	<i>Phronima sedentaria</i>
Amphipod	<i>Phronimopsis spinifera</i>
Armed box crab	<i>Platymera gaudichaudii</i>
Copepod	<i>Pleuromamma borealis</i>
Copepod	<i>Pleuromamma quadrangulata</i>
Copepod	<i>Pleuromamma robusta</i>
Copepod	<i>Pleuromamma scutellata</i>
Copepod	<i>Pleuromamma xiphias</i>
Pelagic red crab	<i>Pleuroncodes planipes</i>
Gooseneck barnacle	<i>Pollicipes polymerus</i>
Amphipod	<i>Polycheria osborni</i>
Amphipod	<i>Primno abyssalis</i>
Amphipod	<i>Primno brevidens</i>
Copepod	<i>Pseudocalanus mimus</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Copepod	<i>Pseudocalanus minutus</i>
Copepod	<i>Pseudocalanus moultoni</i>
Graceful kelp crab	<i>Pugettia gracilis</i>
Northern kelp crab	<i>Pugettia producta</i>
Cryptic kelp crab	<i>Pugettia richii</i>
Sea spider	<i>Pycnogonum stearnsi</i>
Copepod	<i>Racovitzanus antarcticus</i>
Copepod	<i>Rhincalanus nasutus</i>
California rock crab	<i>Romaleon antennarium</i>
Copepod	<i>Sapphirina nigromaculata</i>
Amphipod	<i>Scina nana</i>
Copepod	<i>Scolecithricella minor</i>
Copepod	<i>Scolecithricella ovata</i>
Copepod	<i>Scolecithrix bradyi</i>
Copepod	<i>Scolecithrix danae</i>
Copepod	<i>Scottocalanus persecans</i>
Sharpnose crab	<i>Scyra acutifrons</i>
Barnacle	<i>Semibalanus cariosus</i>
Prawn	<i>Sergestes similis</i>
Barnacle	<i>Solidobalanus engbergi</i>
Offshore blade shrimp	<i>Spirontocaris sica</i>
Amphipod	<i>Streetsia challengerii</i>
Grady's cave amphipod	<i>Stygobromus gradyi</i>
Krill	<i>Stylocheiron abbreviatum</i>
Krill	<i>Stylocheiron longicorne</i>
Littoral pistol shrimp	<i>Synalpheus lockingtoni</i>
Krill	<i>Tessarabrachion oculatum</i>
Amphipod	<i>Themisto pacifica</i>
Krill	<i>Thysanoessa gregaria</i>
Krill	<i>Thysanoessa inspinata</i>
Krill	<i>Thysanoessa spinifera</i>
Copepod	<i>Tortanus discaudatus</i>
Copepod	<i>Triconia conifera</i>
Amphipod	<i>Tryphana malmi</i>
Copepod	<i>Undeuchaeta intermedia</i>
Copepod	<i>Undeuchaeta plumosa</i>
Isopod	<i>Uromunna ubiquita</i>
Amphipod	<i>Vibilia armata</i>
Amphipod	<i>Vibilia australis</i>
Amphipod	<i>Vibilia stebbingi</i>
ECHINODERMATA	
Brittle star	<i>Amphiodia akosmos</i>
Brittle star	<i>Amphiodia occidentalis</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Brittle star	<i>Amphipholis squamata</i>
Brittle star	<i>Asteronyx loveni</i>
Sea star	<i>Astropecten verrilli</i>
Sea urchin	<i>Brisaster latifrons</i>
Sea star	<i>Ceramaster japonicus</i>
Sea star	<i>Ceramaster leptocermus</i>
Cookie cutter star	<i>Ceramaster patagonicus</i>
Sea star	<i>Crossaster borealis</i>
Sea star	<i>Ctenodiscus crispatus</i>
Leather star	<i>Dermasterias imbricata</i>
Sea star	<i>Dipsacaster eximius</i>
Crinoid	<i>Florometra serratissima</i>
Basket star	<i>Gorgonocephalus eucnemis</i>
Sea cucumber	<i>Havelockia benti</i>
Blood star	<i>Henricia leviuscula</i>
Sea star	<i>Heterozonias alternatus</i>
Sea star	<i>Hippasteria californica</i>
Sea star	<i>Hippasteria spinosa</i>
Sea star	<i>Hymenodiscus exilis</i>
Sea star	<i>Leptasterias hexactis</i>
Sea star	<i>Leptasterias pusilla</i>
Sea star	<i>Leptychaster anomalus</i>
Sea star	<i>Lophaster furcilliger</i>
Sea urchin	<i>Lovenia cordiformis</i>
Sand star	<i>Luidia foliolata</i>
Red sea star	<i>Mediaster aequalis</i>
Sea star	<i>Myxoderma sacculatum</i>
Sea star	<i>Nearchaster aciculosus</i>
Sea star	<i>Odontaster crassus</i>
Brittle star	<i>Ophioncus granulatus</i>
Brittle star	<i>Ophionereis diabloensis</i>
Brittle star	<i>Ophionereis eurybrachioplax</i>
Brittle star	<i>Ophiopholis aculeata</i>
Brittle star	<i>Ophiopholis bakeri</i>
Brittle star	<i>Ophiopholis brachyactis</i>
Brittle star	<i>Ophiopholis kennerlyi</i>
Brittle star	<i>Ophiopteris papillosa</i>
Brittle star	<i>Ophiosphalma jolliense</i>
Brittle star	<i>Ophiothrix spiculata</i>
Rainbow star	<i>Orthasterias koehleri</i>
Sea cucumber	<i>Pannychia moseleyi</i>
Sea cucumber	<i>Parastichopus californicus</i>
Sea cucumber	<i>Parastichopus johnsoni</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Sea cucumber	<i>Parastichopus leukothele</i>
Bat star	<i>Patiria miniata</i>
Sea cucumber	<i>Pentamera rigida</i>
Giant sea star	<i>Pisaster giganteus</i>
Ochre star	<i>Pisaster ochraceus</i>
Spiny star	<i>Poraniopsis inflatus</i>
Sea star	<i>Pseudarchaster dissonus</i>
Sea star	<i>Pseudarchaster parelii</i>
Sea star	<i>Pseudarchaster pusillus</i>
Sea cucumber	<i>Pseudostichopus mollis</i>
Sea cucumber	<i>Psolus squamatus</i>
Sea star	<i>Pteraster militaris</i>
Cushion star	<i>Pteraster tessellatus</i>
Sunflower star	<i>Pycnopodia helianthoides</i>
Sea star	<i>Rathbunaster californicus</i>
Sea star	<i>Sagenaster evermanni</i>
Sea cucumber	<i>Scotoplanes globosa</i>
Sun star	<i>Solaster</i>
Sea urchin	<i>Spatangus californicus</i>
Brittle star	<i>Stegophiura ponderosa</i>
Green sea urchin	<i>Strongylocentrotus droebachiensis</i>
Fragile sea urchin	<i>Strongylocentrotus fragilis</i>
Red sea urchin	<i>Strongylocentrotus franciscanus</i>
Purple sea urchin	<i>Strongylocentrotus purpuratus</i>
Sea star	<i>Stylasterias forreri</i>
Sea star	<i>Thriassacanthias penicillatus</i>
CHORDATA	
Ascidian	<i>Aplidium californicum</i>
Ascidian	<i>Aplidium solidum</i>
Ascidian	<i>Ascidia paratropa</i>
Thaliacean	<i>Cyclosalpa bakeri</i>
Lobed tunicate	<i>Cystodytes lobatus</i>
Ascidian	<i>Didemnum carnulentum</i>
Thaliacean	<i>Dolioletta gegenbauri</i>
Ascidian	<i>Eudistoma ritteri</i>
Free-swimming tunicate	<i>Fritillaria borealis</i>
Free-swimming tunicate	<i>Fritillaria pellucida</i>
Ascidian	<i>Halocynthia igaboja</i>
Predatory tunicate	<i>Megalodicopia hians</i>
Free-swimming tunicate	<i>Oikopleura dioica</i>
Free-swimming tunicate	<i>Oikopleura labradoriensis</i>
Free-swimming tunicate	<i>Oikopleura longicauda</i>
Thaliacean	<i>Pyrosoma atlanticum</i>

Table G-3. Invertebrates Species List

Common Name	Scientific Name
Ascidian	<i>Ritterella aequalisiphonis</i>
Thaliacean	<i>Salpa fusiformis</i>
Thaliacean	<i>Salpa maxima</i>
Ascidian	<i>Styela montereyensis</i>
Thaliacean	<i>Thalia democratica</i>
Thaliacean	<i>Thetys vagina</i>
BRACHIOPODA	
Brachiopod	<i>Laqueus californianus</i>
Brachiopod	<i>Platidia hornii</i>
Brachiopod	<i>Terebratalia transversa</i>
Brachiopod	<i>Terebratulina unguicula</i>
ECTOPROCTA	
Bryozoan	<i>Cellaria diffusa</i>
Bryozoan	<i>Costazia robertsoniae</i>
Bryozoan	<i>Crisia maxima</i>
Bryozoan	<i>Flustrellidra corniculata</i>
Bryozoan	<i>Integripelta bilabiata</i>
Bryozoan	<i>Tricellaria ternata</i>
CTENOPHORA	
Comb jelly	<i>Beroe cucumis</i>
Comb jelly	<i>Bolinopsis microptera</i>
Comb jelly	<i>Pleurobrachia bachei</i>
Comb jelly	<i>Thalassocalyce inconstans</i>

Table G-4. Algae and Plants Species List

CHLOROPHYTA	PHAEOPHYTA, cont.	RHODOPHYTA, cont.
<i>Acrosiphonia coalita</i>	<i>Nereocystis luetkeana</i>	<i>Clathromorphum parcum</i>
<i>Blidingia minima</i> var. <i>vexata</i>	<i>Pelvetiopsis limitata</i>	<i>Constantinea simplex</i>
<i>Bryopsis corticulans</i>	<i>Petalonia fascia</i>	<i>Corallina chilensis</i>
<i>Cladophora columbiana</i>	<i>Petrospongium rugosum</i>	<i>Corallina vancouveriensis</i>
<i>Cladophora graminea</i>	<i>Pterygophora californica</i>	<i>Corallophila eatonianum</i>
<i>Codium fragile</i>	<i>Saccharina sessile</i>	<i>Cryptopleura corallinara</i>
<i>Codium setchellii</i>	<i>Scytosiphon dotyii</i>	<i>Cryptopleura lobulifera</i>
<i>Derbesia marina</i>	<i>Scytosiphon lomentaria</i>	<i>Cryptopleura ruprechtiana</i>
<i>Endophyton ramosum</i>	<i>Silvetia compressa</i>	<i>Cryptopleura violacea</i>
<i>Entocladia viridis</i>	<i>Spongonema tomentosum</i>	<i>Cumagloia andersonii</i>
<i>Prasiola meridionalis</i>	<i>Stephanocystis osmundacea</i>	<i>Delesseria decipiens</i>
<i>Ulothrix flacca</i>	RHODOPHYTA	<i>Dilsea californica</i>
<i>Ulva californica</i>	<i>Ahnfeltiopsis leptophylla</i>	<i>Endocladia muricata</i>
<i>Ulva clathrata</i>	<i>Ahnfeltiopsis linearis</i>	<i>Erythrophyllum delesserioides</i>
<i>Ulva compressa</i>	<i>Anotrichium furcellatum</i>	<i>Erythrotrichia carnea</i>
<i>Ulva conglobata</i>	<i>Antithamnion dendroidum</i>	<i>Farlowia compressa</i>
<i>Ulva flexuosa</i>	<i>Audouinella subimmersa</i>	<i>Farlowia conferta</i>
<i>Ulva intestinalis</i>	<i>Bornetia californica</i>	<i>Farlowia mollis</i>
<i>Ulva lactuca</i>	<i>Bossiella dichotoma</i>	<i>Faucheocolax attenuata</i>
<i>Ulva lobata</i>	<i>Bossiella plumosa</i>	<i>Gelidium coulteri</i>
<i>Ulva taeniata</i>	<i>Bossiella schmittii</i>	<i>Gelidium robustum</i>
<i>Urospora</i> sp.	<i>Branchioglossum bipinnatifidum</i>	<i>Gloiocladia laciniata</i>
PHAEOPHYTA	<i>Branchioglossum undulatum</i>	<i>Goniotrichopsis sublittoralis</i>
<i>Alaria marginata</i>	<i>Calliarthron tuberosum</i>	<i>Gracilariophila oryzoides</i>
<i>Analipus japonicus</i>	<i>Callithamnion biserialum</i>	<i>Gracilariopsis andersonii</i>
<i>Colpomenia peregrina</i>	<i>Callophyllis crenulata</i>	<i>Grateloupia californica</i>
<i>Composnema serpens</i>	<i>Callophyllis flabellulata</i>	<i>Grateloupia filicina</i>
<i>Costaria costata</i>	<i>Callophyllis heanophylla</i>	<i>Griffithsia pacifica</i>
<i>Desmarestia herbacea</i>	<i>Callophyllis linearis</i>	<i>Gymnogongrus chiton</i>
<i>Desmarestia ligulata</i>	<i>Callophyllis obtusifolia</i>	<i>Halosaccion glandiforme</i>
<i>Desmarestia munda</i>	<i>Callophyllis pinnata</i>	<i>Halymenia schizymenioides</i>
<i>Dictyonium californicum</i>	<i>Callophyllis violacea</i>	<i>Herposiphonia parva</i>
<i>Egregia menziesii</i>	<i>Centroceras clavulatum</i>	<i>Herposiphonia plumula</i>
<i>Fucus gardneri</i>	<i>Ceramium gardneri</i>	<i>Hildenbrandia occidentalis</i>
<i>Hinksia sandriana</i>	<i>Ceramium pacificum</i>	<i>Hymenena flabelligera</i>
<i>Laminaria ephemera</i>	<i>Chondracanthus canaliculatus</i>	<i>Hymenena multiloba</i>
<i>Laminaria setchellii</i>	<i>Chondracanthus corymbiferus</i>	<i>Janczewskia gardneri</i>
<i>Laminaria sinclairii</i>	<i>Chondracanthus exasperatus</i>	<i>Leachiella pacifica</i>
<i>Leathesia difformis</i>	<i>Chondracanthus harveyanus</i>	<i>Lithophyllum dispar</i>
<i>Melanosiphon intestinalis</i>	<i>Chondracanthus spinosus</i>	<i>Lithothrix aspergillum</i>

Table G-4. Algae and Plants Species List

RHODOPHYTA, cont.	RHODOPHYTA, cont.	RHODOPHYTA, cont.
<i>Maripelta rotata</i>	<i>Neorhodomela larix</i>	<i>Pterothamnion villosum</i>
<i>Mastocarpus jardinii</i>	<i>Nienburgia andersoniana</i>	<i>Ptilota filicina</i>
<i>Mastocarpus papillatus</i>	<i>Odonthalia floccosa</i>	<i>Ptilothamnionopsis lejolisea</i>
<i>Mazzaella affinis</i>	<i>Opuntiella californica</i>	<i>Pugetia fragilissima</i>
<i>Mazzaella californica</i>	<i>Osmundea spectabilis</i>	<i>Pyropia gardneri</i>
<i>Mazzaella flaccida</i>	<i>Peyssonneliopsis epiphytica</i>	<i>Pyropia lanceolata</i>
<i>Mazzaella leptorhynchus</i>	<i>Phycodrys setchellii</i>	<i>Pyropia nereocystis</i>
<i>Mazzaella linearis</i>	<i>Pikea californica</i>	<i>Pyropia perforata</i>
<i>Mazzaella oregona</i>	<i>Pikea pinnata</i>	<i>Rhodochorton purpureum</i>
<i>Mazzaella parksii</i>	<i>Pleonosporium vancouverianum</i>	<i>Rhodymenia californica</i>
<i>Mazzaella rosea</i>	<i>Plocamium pacificum</i>	<i>Rhodymenia callophyllidoides</i>
<i>Mazzaella splendens</i>	<i>Plocamium violaceum</i>	<i>Rhodymenia pacifica</i>
<i>Mazzaella volans</i>	<i>Polyneura latissima</i>	<i>Rhodymeniocolax botryoides</i>
<i>Melobesia marginata</i>	<i>Polysiphonia hendryi</i>	<i>Sahlingia subintegra</i>
<i>Melobesia mediocris</i>	<i>Polysiphonia pacifica</i>	<i>Sarcodiotheca gaudichaudii</i>
<i>Membranoptera dimorpha</i>	<i>Prionitis lanceolata</i>	<i>Schimmelmannia plumosa</i>
<i>Mesophyllum lamellatum</i>	<i>Prionitis linearis</i>	<i>Scinaia confusa</i>
<i>Microcladia borealis</i>	<i>Prionitis sternbergii</i>	<i>Smithora naiadum</i>
<i>Microcladia coulteri</i>	<i>Pseudolithophyllum neofarlowii</i>	<i>Stenogramma interrupta</i>
<i>Myriogramme spectabilis</i>	<i>Pterochondria woodii</i>	<i>Stylonema alsidii</i>
<i>Myriogramme variegata</i>	<i>Pterocladia caloglossoides</i>	<i>Tiffaniella snyderae</i>
<i>Neogastroclonium subarticulatum</i>	<i>Pterosiphonia baileyi</i>	<i>Weeksia reticulata</i>
<i>Neoptilota densa</i>	<i>Pterosiphonia bipinnata</i>	TRACHEOPHYTA
<i>Neoptilota hypnoides</i>	<i>Pterosiphonia dendroidea</i>	<i>Phyllospadix scouleri</i>

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Appendix H

EIS Distribution List

Appendix H

EIS DISTRIBUTION LIST

The Draft EIS, in either hard copy or CD format, was distributed to the following agencies and persons for review and comment. Wide public notification of the website containing the DEIS and related review and comment information was also made electronically, in the media and in the *Federal Register*.

Congressional Committees

Committee on Natural Resources of the House of Representatives:

- U.S. Congressman Doc Hastings, Chair
- U.S. Congressman Peter DeFazio

Committee on Commerce, Science, and Transportation of the Senate:

- U.S. Senator Jay Rockefeller, Chair
- U.S. Senator John Thune, Ranking Member

Federal Agencies

U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service:

- Irma Lagomarsino, Assistant Regional Administrator, West Coast Region
- Chris Yates, Assistant Regional Administrator for Protected Resources Division

U.S. Department of Defense:

- Chuck Hagel, Secretary of Defense

U.S. Department of Homeland Security

U.S. Coast Guard:

- Rear Admiral Karl L. Schultz, Eleventh District Commander
- LCDR Joe Giammanco, Living Marine Resources Officer

U.S. Department of the Interior:

- Sally Jewell, Secretary

U.S. Department of the Interior

Bureau of Land Management:

- Richard Burns, Field Manager

U.S. Department of the Interior

Bureau of Ocean Energy Management:

- Joan Barminski
Deputy Regional Director, Pacific OCS Region
Regulation and Enforcement

U.S. Department of the Interior

U.S. Fish and Wildlife Service:

- Jana Affonso, Deputy Division Chief

U.S. Department of State:

- John Kerry, Secretary of State

U.S. Department of Transportation:

- Ray LaHood, Secretary of Transportation

U.S. Environmental Protection Agency:

- Jared Blumenfeld, Administrator for EPA's Pacific Southwest Region

State Governor

- Jerry Brown, Governor, State of California

State Agencies

California Coastal Commission:

- Mark Delaplaine, Manager, Energy, Ocean Resources and Federal Consistency Division

California Natural Resource Agency:

- Catherine Kuhlman, Deputy Secretary for Ocean and Coastal Matters and Executive Director, California Ocean Protection Council

Local Agencies

County of Mendocino Board of Supervisors

County of Sonoma Board of Supervisors

County and City Agencies with Certified Local Coastal Programs

County of Marin:

- Brian Crawford, Director, Community Development Agency

County of Mendocino:

- Andy Gustavson, Chief Planner, Planning and Building Services Department

County of Sonoma:

- Jennifer Barrett, Deputy Director for Planning, Sonoma County Permit and Resource Management Department

City of Point Arena:

- Hunter Alexander, City Administrator/City Clerk, City of Point Arena

City of San Francisco:

- John Raheim, Planning Director, City of San Francisco

Sanctuary Advisory Councils

Cordell Bank National Marine Sanctuary Advisory Council:

- Peter Adams
- Leslie Adler-Ivanbrook
- John Berge
- Rachel Bergren
- George Clyde (on both Cordell Bank and Gulf of the Farallones National Marine Sanctuary Advisory Councils)
- LT Jeannie Crump (on both Cordell Bank and Gulf of the Farallones National Marine Sanctuary Advisory Councils)
- Michael Cummings
- LT Cody Dunagan (on both Cordell Bank and Gulf of the Farallones National Marine Sanctuary Advisory Councils)
- Sarah Hameed
- Jaime Jahncke (on both Cordell Bank and Gulf of the Farallones National Marine Sanctuary Advisory Councils)
- Kevin Krick
- Paul Michel (on both Cordell Bank and Gulf of the Farallones National Marine Sanctuary Advisory Councils)

- Chris Mobley (on both Cordell Bank and Gulf of the Farallones National Marine Sanctuary Advisory Councils)
- Lance Morgan
- Richard Ogg
- Todd Steiner
- Noah Wagner
- Bill Wolpert

Gulf of the Farallones National Marine Sanctuary Advisory Council:

- Bruce Bowser
- Richard Charter
- George Clyde (on both Gulf of the Farallones and Cordell Bank National Marine Sanctuary Advisory Councils)
- Natalie Cosentino-Manning
- Jeannie Crump (on both Gulf of the Farallones and Cordell Bank National Marine Sanctuary Advisory Councils)
- Frank Dean
- Jackie Dragon
- LT Cody Dunagan (on both Gulf of the Farallones and Cordell Bank National Marine Sanctuary Advisory Councils)
- Timothy Duff
- Barbara Emley
- Peter Grenell
- Karen Grimmer
- Jaime Jahncke (on both Gulf of the Farallones and Cordell Bank National Marine Sanctuary Advisory Councils)
- Catherine Kuhlman
- Richard Kuehn
- John Largier
- Gerry McChesney
- Mick Menigoz
- Paul Michel (on both Gulf of the Farallones and Cordell Bank National Marine Sanctuary Advisory Councils)
- Chris Mobley (on both Gulf of the Farallones and Cordell Bank National Marine Sanctuary Advisory Councils)
- Anne Morkill
- Cicely Muldoon
- Mike Murray
- Kellyx Nelson
- Dominique M. Richard
- Patrick Rutten
- Clare Waldmann
- Bob Wilson

Tribes

- Greg Sarris, Chairman, Federated Indians of Graton Rancheria
- Emilio Valencia, Chairman, Kashia Band of Pomo Indians of Stewarts Point Rancheria
- Nelson Pinola, Chairman
Manchester Band of Pomo Indians

Public Libraries

County of Marin:

- Librarian, Marin County Free Library, Civic Center Library
- Librarian, Marin County Free Library, Point Reyes Library
- Librarian, San Rafael Public Library, Downtown

County of Mendocino:

- Librarian, County of Mendocino Coast Community Library
- Librarian, County of Mendocino, Main Branch Library

County of Sonoma:

- Librarian, Sonoma County Public Library, Santa Rosa Central Library
- Librarian, Sonoma County Public Library, Guerneville Regional Library
- Librarian, Sonoma County Public Library, Sebastopol Regional Library
- Librarian, Sonoma County Public Library, Cloverdale Regional Library
- Librarian, Sonoma County Public Library, Petaluma Regional Library
- Librarian, U.C. Davis Bodega Marine Laboratory Library

County of San Francisco:

- Librarian, San Francisco Public Library, Main Library



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Part II

Department of Commerce

National Oceanic and Atmospheric Administration

15 CFR Part 922

Proposed Expansion and Regulatory Revision of Gulf of the Farallones
and Cordell Bank National Marine Sanctuaries; Proposed Rule

DEPARTMENT OF COMMERCE**National Oceanic and Atmospheric Administration****15 CFR Part 922**

[Docket No. 130405335–4240–01]

RIN 0648–BD18

Proposed Expansion and Regulatory Revision of Gulf of the Farallones and Cordell Bank National Marine Sanctuaries

AGENCY: Office of National Marine Sanctuaries (ONMS), National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC).

ACTION: Proposed rule.

SUMMARY: The National Oceanic and Atmospheric Administration (NOAA) is proposing to expand the boundaries of Gulf of the Farallones National Marine Sanctuary (GFNMS) and Cordell Bank National Marine Sanctuary (CBNMS) to an area north and west of their current boundaries, as well as to amend existing sanctuary regulations and add new regulations. NOAA is also proposing to revise the corresponding sanctuary terms of designation and management plans. The purpose of this action is to extend national marine sanctuary protections to an area that has nationally significant marine resources and habitats and is the source of nutrient-rich upwelled waters for the existing sanctuaries. A draft environmental impact statement and draft revised management plans have been prepared for this proposed action. NOAA is soliciting public comment on the proposed rule, draft environmental impact statement, and draft revised management plans.

DATES: Comments on this proposed rule will be considered if received by June 30, 2014. Public hearings will be held as detailed below:

(1) Sausalito, CA

Date: May 22, 2014.

Location: U.S. Army Corps of Engineers Bay Model Visitor Center.
Address: 2100 Bridgeway Blvd., Sausalito, CA 94965.

Time: 6 p.m.

(2) Point Arena, CA

Date: June 16, 2014.

Location: Point Arena City Hall.
Address: 451 School St., Point Arena, CA 95468.

Time: 6 p.m.

(3) Gualala, CA

Date: June 17, 2014.

Location: Gualala Community Center.
Address: 47950 Center St., Gualala, CA 95445.

Time: 6 p.m.

(4) Bodega Bay, CA

Date: June 18, 2014.

Location: Grange Hall.
Address: 1370 Bodega Ave., Bodega Bay, CA 94923.

Time: 6 p.m.

ADDRESSES: You may submit comments on this document, identified by NOAA–NOS–2012–0228, by any of the following methods:

- **Electronic Submissions:** Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to www.regulations.gov/ #!docketDetail;D=NOAA-NOS-2012-0228, click the “Comment Now!” icon, complete the required fields and enter or attach your comments.

- **Mail:** Submit written comments to Maria Brown, Sanctuary Superintendent, Gulf of the Farallones National Marine Sanctuary, 991 Marine Drive, The Presidio, San Francisco, CA 94129.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NOAA. All comments received are a part of the public record and will generally be posted for public viewing on www.regulations.gov without change. All personal identifying information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. ONMS will accept anonymous comments (enter “N/A” in the required fields if you wish to remain anonymous). Attachments to electronic comments will be accepted in Microsoft Word, Excel, or Adobe PDF file formats only.

FOR FURTHER INFORMATION CONTACT:

Maria Brown at Maria.Brown@noaa.gov or 415–561–6622; or Dan Howard at Dan.Howard@noaa.gov or 415–663–0314.

SUPPLEMENTARY INFORMATION:**I. Introduction****A. Gulf of the Farallones and Cordell Bank National Marine Sanctuaries**

Gulf of the Farallones National Marine Sanctuary

GFNMS was designated in 1981, and was established to protect and preserve a unique and fragile ecological community, including the largest seabird colony in the contiguous United States and diverse and abundant marine

mammals. GFNMS is located along and offshore California’s north-central coast, west of northern San Mateo, San Francisco, Marin and southern Sonoma Counties. GFNMS is composed of approximately 1,279 square statute miles (966 square nautical miles) of offshore waters extending out to and around the Farallon Islands and nearshore waters (up to the mean high water line) from Bodega Head to Rocky Point in Marin. The Farallon Islands lie along the outer edge of the continental shelf, between 15 and 22 statute miles (13 and 19 nmi) southwest of Point Reyes and approximately 30 miles (26 nmi) due west of San Francisco. In addition to sandy beaches, rocky cliffs, small coves, and offshore stacks, GFNMS includes open bays (Bodega Bay, Drakes Bay) and enclosed bays or estuaries (Bollinas Lagoon, Tomales Bay, Estero Americano, and Estero de San Antonio). GFNMS is located inshore of the California current, and its waters are characterized by wind-driven upwelling, localized eddies, counter-current gyres, high nutrient supply, and high levels of phytoplankton.

Cordell Bank National Marine Sanctuary

CBNMS was designated in 1989, and was established to protect and preserve the extraordinary ecosystem, including invertebrates, marine birds, mammals, and other natural resources, of Cordell Bank and its surrounding waters. CBNMS is located offshore of California’s north-central coast, off of Marin County. CBNMS protects an area of 529 square statute miles (399 square nautical miles). The main feature of the sanctuary is Cordell Bank, an offshore granite bank located on the edge of the continental shelf, about 49 miles (43 nmi) northwest of the Golden Gate Bridge and 23 miles (20 nmi) west of the Point Reyes lighthouse. CBNMS is entirely offshore and shares its southern and eastern boundary with GFNMS. Similar to GFNMS, CBNMS is located in a major coastal upwelling system. The combination of oceanic conditions and undersea topography provides for a highly productive environment in a discrete offshore area. Prevailing currents push nutrients from upwelling southward along the coast, moving nutrients and other prey over the upper levels of the Bank. The vertical relief and hard substrate of the Bank provide benthic habitat with near-shore characteristics in an open ocean environment 23 miles (20 nmi) from shore. The combination of sedentary plants and animals typical of nearshore waters in close proximity to open ocean species like blue whales and albatross creates a rare mix of species and a

unique biological community at CBNMS.

The National Marine Sanctuaries Act (NMSA) (16 U.S.C. 1431 *et seq.*) gives NOAA the authority to expand national marine sanctuaries to meet the purposes and policies of the NMSA, including:

- “. . . to provide authority for comprehensive and coordinated conservation and management of these marine areas [national marine sanctuaries], and activities affecting them, in a manner which complements existing regulatory authorities (16 U.S.C. 1431(b)(2)); [and]

- “to maintain the natural biological communities in the national marine sanctuaries, and to protect, and, where appropriate, restore and enhance natural habitats, populations and ecological processes . . .” (16 U.S.C. 1431(b)(3)).

The NMSA also requires NOAA to periodically review and evaluate progress in implementing the management plan and goals for each national marine sanctuary. The management plans and regulations must be revised as necessary to fulfill the purposes and policies of the NMSA (16 U.S.C. 1434(e)) to ensure that each sanctuary continues to best conserve, protect, and enhance their nationally significant living and cultural resources.

In addition to expanding the boundaries of GFNMS and CBNMS, the proposed action would revise the sanctuaries' management plans. Application of the NMSA to the expanded sanctuary boundaries through the proposed action would provide comprehensive and coordinated management for the Point Arena upwelling area and south to the existing national marine sanctuaries. Some of the GFNMS and CBNMS regulations would be extended to the expansion area without changes, some regulations would be altered, and some new regulations would be added in order to best suit the resource protection needs of the expanded sanctuaries. The regulatory changes are described in detail below in the “Summary of the Regulatory Amendments” section. The boundary expansion, regulatory changes, and new management plans would result in additional safeguards for the resources of the area while facilitating uses compatible with resource protection.

The environmental effects of the proposed expansion of sanctuary boundaries and revisions to sanctuary regulations and management plans are analyzed in the DEIS. The public is invited to comment on the DEIS and draft management plans, which are available at www.regulations.gov/

[#docketDetail;D=NOAA-NOS-2012-0228](#) or http://farallones.noaa.gov/manage/expansion_cbgf.html or may be obtained by contacting the individual listed under the heading **FOR FURTHER INFORMATION CONTACT**.

B. Need for Action

The proposed action would expand the boundaries of GFNMS and CBNMS north and west of the sanctuaries' current boundaries and would include waters and submerged lands off of Marin, Sonoma and Mendocino Counties. This expansion would add to the National Marine Sanctuary System a globally significant coastal upwelling center originating off of Point Arena and flowing into GFNMS and CBNMS via wind-driven currents. The proposed action would also apply existing regulations into the expansion area, amend current regulations for GFNMS and CBNMS, and add new regulations. Together these regulatory changes would provide comprehensive management and protection of the nationally significant resources of the area encompassed by the current sanctuaries and the expansion area.

The proposed expansion area, from the upwelling off the Point Arena coast and the waters south to GFNMS and CBNMS, is an integral geographic component of the overall marine ecosystem for these sanctuaries. The upwelled water, rich with nutrients, that flows from the Point Arena upwelling center is the regional ecosystem driver for productivity in coastal waters of north-central California. Flowing south from Point Arena, the area supports a marine food web made up of many species of algae, invertebrates, fish, seabirds, and marine mammals. Some species are transitory, travelling hundreds or thousands of miles to the region, such as endangered blue whales, albatross, shearwaters, king salmon, white and salmon sharks, while others live year round in the sanctuaries, such as Dungeness crab, sponges, other benthic invertebrates and many species of rockfish. Of note, the largest assemblage of breeding seabirds in the contiguous United States is at the Farallon Islands, and each year their breeding success depends on a healthy and productive marine ecosystem to allow nesting adults and fledgling young to feed and flourish. Given that these sensitive resources are particularly susceptible to damage from human activities, including this area within CBNMS and GFNMS would conserve and protect critical resources by preventing or reducing human-caused impacts such as marine pollution, and wildlife and seabed disturbance.

In addition, the proposed action would protect significant submerged cultural resources and historical properties, as defined by the National Historic Preservation Act and its regulations (historical properties include but are not limited to: Artifacts, records, remains related to or located in the properties and properties of traditional religious and cultural importance to an Indian tribe and that meet the National Register criteria). There are several existing state and federal laws that provide some degree of protection of historical resources, but the State of California regulations only extend 3 nautical miles offshore and existing federal regulations do not provide comprehensive protection of these resources. Records document over 200 vessel and aircraft losses between 1820 and 1961 along California's north-central coast from Bodega Head north to Point Arena. Submerged archaeological remnants related to a number of former doghole ports, are likely to exist in the area. Doghole ports were small ports on the Pacific Coast between Central California and Southern Oregon that operated between the mid-1800s until 1939. Such archaeological remnants could include landings, wire, trapeze loading chutes and offshore moorings.

While there is no documentation of submerged Native American human settlements in the proposed boundary expansion area, some may exist there, since Coast Miwok and Pomo peoples have lived and harvested the resources of this abundant marine landscape for thousands of years. Sea level rise at the end of the last great Ice Age inundated a large area that was likely used by these peoples when it was dry land. The proposed action would prohibit possession, moving, removing, or injuring sanctuary historical resources.

C. History of the Proposed Boundary Expansion

In 2001, NOAA received public comment during the joint management plan review scoping meetings requesting that GFNMS and CBNMS be expanded north and west. Since 2003, sanctuary advisory councils for both national marine sanctuaries have regularly discussed and supported boundary expansion northward and westward at advisory council meetings, which are open to the public. In addition to the public and advisory council input, legislation was proposed between 2004 and 2011 by then-Congresswoman Lynn Woolsey, Senator Barbara Boxer, and cosponsors, to expand and protect GFNMS and CBNMS, but was never passed by Congress. Congressional, public, and

NOAA interest in expanding CBNMS and GFNMS stemmed from a desire to protect the biologically rich underwater habitat and important upwelling center off Point Arena, which, as described, is the source of nationally significant nutrient-rich waters.

The sanctuary advisory councils formally expressed support for the proposed boundary expansion and protection legislation in four resolutions. On April 19, 2007, the Gulf of the Farallones Advisory Council passed a resolution supporting sanctuary boundary expansion. On September 19, 2007, the CBNMS Advisory Council passed a resolution supporting protection for Bodega Canyon via proposed legislation. On December 13, 2007, the GFNMS Advisory Council passed another resolution supporting legislation to expand the sanctuaries. On November 11, 2011, the GFNMS Advisory Council passed a third resolution which acknowledged the legislation under consideration at that time and again supported expanding the GFNMS and CBNMS boundaries.

As a result of the public interest in boundary expansion and the potential need for and benefits from additional resource protection, in 2008 NOAA included boundary expansion actions in the revised management plans for CBNMS and GFNMS. The strategies (GFNMS Resource Protection Action Plan, Strategy RP-9 and CBNMS Administration Action Plan, Strategy AD-10) indicated the sanctuary managers would develop a framework to evaluate boundary alternatives, with public input. Some of the recommended criteria included consideration of boundary changes that would: Be inclusive and ensure the maintenance of the area's natural ecosystem, including its contribution to biological productivity; be biogeographically representative; facilitate, to the extent compatible with the primary objective of resource protection, public and private uses of the marine resources; and provide additional comprehensive and coordinated management of the area.

Due to continued interest in expanding GFNMS and CBNMS, NOAA, in compliance with Section 304(e) of the NMSA, conducted public scoping from December 21, 2012, to March 1, 2013 (77 FR 75601), to identify issues associated with a proposed expansion. NOAA held three public scoping meetings during this period: One in Bodega Bay in January 2013, one in Point Arena in February 2013, and one in Gualala in February 2013. These public meetings were attended by

several hundred people. NOAA received more than 300 written submissions, along with the oral comments received during the three public scoping meetings, posted under docket number NOAA-NOS-2012-0228 on www.regulations.gov.

Comments received during this process were analyzed by ONMS staff, and are addressed in the accompanying draft environmental impact statement, with analysis of the proposed action and four alternatives. Scoping revealed wide support for the protection of areas in Sonoma and southern Mendocino Counties, as well support for the area included in the proposed expansion. Some commenters also suggested the protection of areas further north and south of the proposed expansion or other alternate boundary configurations for expanding the boundaries of GFNMS and CBNMS. Whereas some commenters were opposed to expanding the sanctuaries or specific sanctuary regulations, there was generally strong support for extending existing sanctuary regulations to the proposed expanded area, including prohibitions on oil and gas development. Many commenters also indicated opposition to any future regulations of fishing under the NMSA. Other comments focused on: Operation of motorized personal watercraft use in the expanded portions of GFNMS; protection of wildlife from human disturbance; and future development of alternative energy and aquaculture.

During the development of this action, it became clear that a wholesale extension of GFNMS and CBNMS regulations to the respective expansion areas would not be the most judicious approach in order to meet the goals of providing resource protection and allowing compatible uses. Therefore, NOAA is proposing to extend some of the regulations unchanged to the proposed expansion area, amend some of the existing regulations that would apply to both the existing sanctuaries and the proposed expansion area, and add some new regulations.

Additional information on the background of the proposed action is available at http://farallones.noaa.gov/manage/expansion_cbgf.html.

II. Summary of Proposed Changes to the Sanctuary Terms of Designation

Section 304(a)(4) of the NMSA requires that the terms of designation for national marine sanctuaries include: (1) The geographic area included within the Sanctuary; (2) the characteristics of the area that give it conservation, recreational, ecological, historical, research, educational, or esthetic value; and (3) the types of activities subject to

regulation by NOAA to protect those characteristics. This section also specifies that the terms of the designation may be modified only by the same procedures by which the original designation is made.

To implement this action, NOAA is proposing changes to the GFNMS and CBNMS terms of designation, which were last published in the **Federal Register** on November 20, 2008 (73 FR 70488).

A. Revisions to the GFNMS Terms of Designation

NOAA is proposing to revise the GFNMS terms of designation to:

1. Update the title by adding "Terms of" and removing "Document."
2. Modify the geographical description of the sanctuary in the preamble.
3. Modify Article I "Effect of Designation" by referring specifically to Gulf of the Farallones National Marine Sanctuary.
4. Modify Article II "Description of the Area" by updating the description of the size of the sanctuary and describing the proposed new boundary for the sanctuary.
5. Modify Article III "Characteristics of the Area That Give It Particular Value" by updating the description of the nationally significant characteristics of the area to include the globally significant coastal upwelling center.
6. Modify Article IV "Scope of Regulation" by updating Section 1 to include: A more complete description of "hydrocarbon operations"; adding "minerals" to what had been "hydrocarbon operations"; and adding a new subsection I, "Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Act or Sanctuary regulations", and "In addition, under no circumstances would a permit or authorization be issued for exploring for, developing or producing oil, gas, or minerals within the Sanctuary."
7. Modify Article V "Relation to Other Regulatory Programs" by updating Section 3 to include the dates of designation and expansion used for certification.

The revised terms of designation are proposed to read as follows (new text in quotes and deleted text in brackets and *italics*): This proposed rule provides only those articles and sections of the terms of designation for GFNMS for which NOAA proposes a change. The full text for the current GFNMS terms of designation may be found at: Farallones.noaa.gov/manage/pdf/

GFNMS Revised_Designation_11-20-2008.pdf.

Terms of Designation for the Gulf of the Farallones National Marine Sanctuary

Preamble

Under the authority of Title III of the Marine Protection, Research and Sanctuaries Act of 1972, Public Law 92–532 (the Act), the waters and submerged lands along the Coast of California [north and south of “Alder Creek along the 39th parallel”][*Point Reyes Headlands*], between “Manchester Beach in Mendocino County”[*Bodega Head*] and Rocky Point “in Marin County” and surrounding the Farallon Islands “and Noonday Rock along the northern coast of California,” are hereby designated a National Marine Sanctuary for the purposes of preserving and protecting this unique and fragile ecological community.

Article I. Effect of Designation

Within the area [designated in 1981 as *The Point Reyes/Farallon Islands National Marine Sanctuary (the Sanctuary)*] described in Article II, the Act authorizes the promulgation of such regulations as are reasonable and necessary to protect the values of the “Gulf of the Farallones National Marine” Sanctuary “(the Sanctuary)”. Section 1 of Article IV of the “[is]” “Terms of” Designation [Document] lists activities of the types that are either to be regulated on the effective date of final rulemaking or may have to be regulated at some later date in order to protect Sanctuary resources and qualities. Listing does not necessarily mean that a type of activity will be regulated; however, if a type of activity is not listed it may not be regulated, except on an emergency basis, unless section 1 of Article IV is amended to include the type of activity by the same procedures by which the original designation was made.

Article II. Description of the Area

The Sanctuary consists of an area of the waters and the submerged lands thereunder adjacent to the coast of California of approximately “2,490”[966] square nautical miles (nmi)[.]. “The boundary” extend[s] [ing] seaward to a distance of “30”[6] nmi “west” from the mainland “at Manchester Beach and extends south approximately 45 nmi to the northwestern corner of Cordell Bank National Marine Sanctuary (CBNMS), and extends approximately 38 nmi east along the northern boundary of CBNMS, approximately 7 nmi west of Bodega Head. The boundary extends” from [*Point Reyes to*] Bodega Bay “to Point Reyes” and 12 nmi west from the Farallon Islands and Noonday Rock, and includ[es] [ing] the intervening waters and submerged lands. “The Sanctuary includes Bolinas Lagoon, Tomales Bay, Giacomini Wetland, Estero de San Antonio (to the tide gate at Valley Ford-Franklin School Road) and Estero Americano (to the bridge at Valley Ford-Estero Road), as well as Bodega Bay, but does not include Bodega Harbor, the Salmon Creek Estuary, the Russian River Estuary, the Gualala River Estuary, the Arena Cove Pier or the Garcia River Estuary”. The precise boundaries are defined by regulation.

Article III. Characteristics of the Area That Give It Particular Value

The Sanctuary “encompasses a globally significant coastal upwelling center that” includes a rich and diverse marine ecosystem and a wide variety of marine habitats, including habitat for over 36 species of marine mammals. Rookeries for over half of California’s nesting marine bird populations and nesting areas for at least 12 of 16 known U.S. nesting marine bird species are found within the boundaries. Abundant populations of fish and shellfish are also found within the Sanctuary. The Sanctuary also has one of the largest seasonal concentrations of adult white sharks (*Carcharodon carcharias*) in the world. “The area adjacent to and offshore of Point Arena, due to seasonal winds, currents and oceanography, drives one of the most prominent and persistent upwelling centers in the world, supporting the productivity of the sanctuary. The nutrient-rich water carried down coast by currents promote thriving nearshore kelp forests, productive commercial and recreational fisheries, and diverse wildlife assemblages. Large predators, such as white sharks, sea lions, killer whales, and baleen whales, travel from thousands of miles away to feed in these productive waters. Rocky shores along the Sonoma and Mendocino County coastlines are largely intact, and teem with crustaceans, algae, fish and birds.”

Article IV. Scope of Regulation

Section 1. Activities Subject to Regulation

The following activities are subject to regulation, including prohibition, as may be necessary to ensure the management, protection, and preservation of the conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, and aesthetic resources and qualities of this area:

- a. [*Hydrocarbon operations*] “Exploring for, developing or producing oil, gas, or minerals within the Sanctuary”;
- b. Discharging or depositing any substance within or from beyond the boundary of the Sanctuary;
- c. Drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary; or constructing, placing, or abandoning any structure, material, or other matter on or in the submerged lands of the Sanctuary;
- d. Activities regarding cultural or historical resources;
- e. Introducing or otherwise releasing from within or into the Sanctuary an introduced species;
- f. Taking or possessing any marine mammal, marine reptile, or bird within or above the Sanctuary except as permitted by the Marine Mammal Protection Act, Endangered Species Act, and Migratory Bird Treaty Act;
- g. Attracting or approaching any animal;
- h. Operating a vessel (i.e., watercraft of any description) within the Sanctuary[.] “; and
- i. Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Act or Sanctuary regulations.

In addition, a permit or authorization may not be issued for exploring for, developing or producing oil, gas, or minerals within the Sanctuary under any circumstances.”

Article V. Relation to Other Regulatory Programs

Section 3. Other Programs

All applicable regulatory programs will remain in effect, and all permits, licenses, “approvals,” and other authorizations issued [pursuant thereto] “after January 16, 1981, with respect to activities conducted within the original Sanctuary boundary and after the effective date of the expansion of the Sanctuary with respect to activities conducted within the expansion area” will be valid within the Sanctuary unless authorizing any activity prohibited by any regulation implementing Article IV. “No valid lease, permit, license, approval or other authorization for activities in the expansion area of the Sanctuary issued by any federal, State, or local authority of competent jurisdiction and in effect on the effective date of the expansion may be terminated by the Secretary of Commerce or by his or her designee provided the holder of such authorization complies with the certification procedures established by Sanctuary regulations.” [The Sanctuary regulations shall set forth any necessary pertaining to certification procedures in order for them to remain valid.]

[End Of Terms Of Designation]

B. Revisions to the CBNMS Terms of Designation

NOAA is revising the CBNMS terms of designation to:

1. Update the title by adding “Terms of”, removing “Document”, and making minor technical changes.
2. Modify the Preamble to add “Bodega Canyon” and “submerged lands” as part of the area designated the Cordell Bank National Marine Sanctuary, and making minor technical changes.
3. Modify Article I “Effect of Designation” by making minor technical changes.
4. Modify Article II “Description of the Area” by changing the description of the size of the sanctuary and describing the proposed new boundary for the sanctuary.
5. Modify Article III “Characteristics of the Area That Give It Particular Value” by updating the description of the nationally significant characteristics of the area to include Bodega Canyon and the additional area in the Sanctuary.
6. Modify Article IV “Scope of Regulation” by updating section 1, subsection c, to include a more complete description of “hydrocarbon operations” and adding “minerals” to what had been “hydrocarbon operations”; and by adding a new subsection i to section 1, “Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Act or Sanctuary regulations”, and by adding “In addition, under no circumstances would a permit or

authorization be issued for exploring for, developing or producing oil, gas, or minerals within the Sanctuary.”

7. Modify Article V “Relation to Other Regulatory Programs” by updating section 3 to include the dates of designation and expansion used for certification.

This proposed rule provides only those articles and sections for the terms of designation for CBNMS for which NOAA proposes a change. The full text for the current CBNMS terms of designation may be found at cordellbank.noaa.gov/library/74_fr_12088.pdf. The revised CBNMS terms of designation are proposed to read as follows (new text in quotes and deleted text in brackets and italics):

Terms Of Designation For The Cordell Bank National Marine Sanctuary

Preamble

Under the authority of Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, 16 U.S.C. 1431 et seq. (the “Act”), [the]Cordell Bank, “Bodega Canyon,” and “their”[its] surrounding waters “and submerged lands” offshore northern California, as described in Article “II”[2], are hereby designated as the Cordell Bank National Marine Sanctuary (the Sanctuary) for the purpose of protecting and conserving that special, discrete, highly productive marine area and ensuring the continued availability of the conservation, ecological, research, educational, aesthetic, historical, and recreational resources therein.

Article 1. Effect of Designation

The Sanctuary was designated on May 24, 1989 (54 FR 22417). Section 308 of the National Marine Sanctuaries Act, 16 U.S.C. 1431 et seq. (NMSA), authorizes the issuance of such regulations as are necessary to implement the designation, including managing, protecting and conserving the conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, and aesthetic resources and qualities of the Sanctuary. Section 1 of Article IV of the “ese”[is] “Terms of” Designation [Document] lists activities of the types that are either to be regulated on the effective date of final rulemaking or may have to be regulated at some later date in order to protect Sanctuary resources and qualities. Listing does not necessarily mean that a type of activity “y”[ies] will be regulated; however, if a type of activity is not listed it may not be regulated, except on an emergency basis, unless Section 1 of Article IV is amended to include the type of activity by the same procedures by which the original designation was made.

Article II. Description of the Area

The Sanctuary consists of a “n approximately 971”[399] square nautical mile area of marine waters and the submerged lands thereunder encompassed by a “northern” boundary [extending approximately 250° from the northernmost]” that begins approximately 6 nautical miles west of Bodega Head in Sonoma County, California and extends west approximately 38 nautical miles, coterminous with the” boundary of the Gulf of the Farallones

National Marine Sanctuary (GNFMS). “From that point, the western boundary of the Sanctuary extends south approximately 34 nautical miles. From that point, the southern boundary of the Sanctuary continues east 15 nautical miles, where it intersects the GNFMS boundary. The eastern boundary of the Sanctuary is coterminous with the GNFMS boundary, and is a series of straight lines connecting in sequence,” [to the 1,000 fathom isobath northwest of the Bank, then south along this isobath to the GNFMS boundary and back to the northeast along this boundary] to the beginning point. The precise boundaries are set forth in the regulations.

Article III. Characteristics of the Area That Give It Particular Value

Cordell Bank “and Bodega Canyon are” [is] characterized by a combination of oceanic conditions and undersea topography that provides for a highly productive environment in a discrete, well-defined area. In addition, the Bank, “Canyon,” and “their” [its] surrounding waters may contain historical resources of national significance. The Bank consists of a series of steep-sided ridges and narrow pinnacles rising from the edge of the continental shelf. “The Bank is” [It lies on a plateau] 300–400 feet (91–122 meters) deep and ascends to within [about] 115 feet (35 meters) of the surface at its shallowest point. “Bodega Canyon is about 12 miles (10.8 nautical miles) long and is over 5,000 feet (1,524 m) deep.” The seasonal upwelling of nutrient-rich bottom waters and wide depth ranges in the vicinity, have led to a unique association of subtidal and oceanic species. The vigorous biological community flourishing at Cordell Bank “and Bodega Canyon” includes an exceptional assortment of [algae,] invertebrates, fishes, marine mammals and seabirds. “Predators travel from thousands of miles away to feed in these productive waters.”

Article IV. Scope of Regulation

Section 1. Activities Subject to Regulation

The following activities are subject to regulation, including prohibition, as may be necessary to ensure the management, protection, and preservation of the conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, and aesthetic resources and qualities of this area:

- a. Depositing or discharging any material or substance;
- b. Removing, taking, or injuring or attempting to remove, take, or injure benthic invertebrates or algae located on the Bank or on or within the line representing the 50 fathom isobath surrounding the Bank;
- c. “Exploring for, developing or producing oil, gas or minerals within the Sanctuary”[Hydrocarbon (oil and gas) activities within the Sanctuary];
- d. Anchoring on the Bank or on or within the line representing the 50 fathom contour surrounding the Bank;
- e. Activities regarding cultural or historical resources;
- f. Drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary; or constructing, placing, or

abandoning any structure, material, or other matter on or in the submerged lands of the Sanctuary;

g. Taking or possessing any marine mammal, marine reptile, or bird except as permitted under the Marine Mammal Protection Act, Endangered Species Act or Migratory Bird Treaty Act; [and]

h. Introducing or otherwise releasing from within or into the Sanctuary an introduced species[.]”; and

i. Interfering with an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Act or Sanctuary regulations.

In addition, a permit or authorization may not be issued for exploring for, developing or producing oil, gas, or minerals within the Sanctuary under any circumstances.”

Article V. Relation to Other Regulatory Programs

Section 3. Other Programs

All applicable regulatory programs shall remain in effect, and all permits, licenses, approvals, and other authorizations issued “after July 31, 1989, with respect to activities conducted within the original Sanctuary boundary and after the effective date of the expansion of the Sanctuary with respect to activities conducted within the expansion area” pursuant to those programs shall be valid unless prohibited by regulations implementing Article IV.

[End Of Terms Of Designation]

III. Summary of the Regulatory Amendments

With this action, NOAA is proposing to do the following:

- Amend the regulations describing the sanctuary boundaries in order to expand the sanctuaries;
- Extend existing sanctuary regulations to the expansion area without any changes;
- Amend existing sanctuary regulations that apply in either or both existing and expansion areas; and
- Add new regulations.

Gulf of the Farallones National Marine Sanctuary Regulations

The proposed new boundary for GNFMS would increase the size of the sanctuary from approximately 1,279 square miles to 3,297 square miles and would extend protection to the submerged lands and the globally-significant coastal upwelling center at Point Arena and the nutrient-rich waters that flow via wind-driven currents from the upwelling center into the existing portions of GNFMS. These nutrients are the foundation of the food-rich environment of the sanctuary.

This section describes the changes NOAA is proposing to make to the regulations for GNFMS to implement the proposed expansion of the sanctuary, which is the basis for this rulemaking. It is organized by type of regulatory amendments as follows:

- It includes proposed changes to the boundary description;
- It would apply existing regulations without changes to the proposed expansion area for

certain regulations and exceptions related to discharge, altering the seabed, taking and possessing certain species, disturbing historical resources, introducing introduced species, attracting white sharks, deserting a vessel, exemptions for Department of Defense and emergency response, and permit criteria and requirements;

- It would amend several existing regulations and apply them to either or both the existing sanctuary and proposed expansion area including prohibiting oil, gas and minerals exploration, discharging graywater, operating motorized personal watercrafts, flying aircrafts below 1,000 feet in certain designated zones, sailing cargo vessels in certain designated zones, approaching white sharks in certain designated zones, and minor technical changes to boundary coordinates;
- It would add new regulations related to interference with an investigation and the ability for NOAA to authorize certain activities otherwise prohibited.

Boundary Expansion

NOAA is proposing to modify the boundary of GFNMS to include the coastal waters and submerged lands north of the current sanctuary extending to the 39th parallel, just north of Point Arena in Mendocino County, and extending seaward to the continental slope to approximately the 10,000-foot (1,667-fathom) depth contour. NOAA is also proposing to clarify that the boundary of GFNMS includes the restored Giacomini Wetland at the northeastern end of Tomales Bay to the Mean High Water Line consistent with current sanctuary regulations. The combined expanded boundary would increase the size of the sanctuary from 1,279 square miles (966 square nautical miles) to 3,297 square miles (2,490 square nautical miles). The expanded area would extend shoreward to the Mean High Water Line, but would not include Salmon Creek Estuary, the Russian River Estuary, the Gualala River Estuary, Arena Cove east of the pier or the Garcia River Estuary. The southern boundary and portions of the western boundary of GFNMS would be coterminous with CBNMS. A map of the area under consideration may be found online at http://farallones.noaa.gov/manage/expansion_cbgf.html.

Application of Existing Regulations Without Changes to Proposed Expansion Area

Prohibition on Certain Discharges

Generally, discharging or depositing any material or other matter from within or into the sanctuary are prohibited in the existing sanctuary and would be prohibited in the proposed expansion area as well. The exceptions currently in place for some activities would apply in the proposed expansion area as well and are described below. The prohibition would apply not only to discharges and deposits originating in the sanctuary (e.g., from vessels in the sanctuary), but also, for example, from discharges and deposits occurring above the sanctuaries. A description of the impacts of this discharge regulation can be found in the discussion of the proposed action in the DEIS

published concurrently with this proposed rule. NOAA is proposing to extend the following exceptions to the GFNMS discharge/deposit prohibition to the expansion area:

1. The discharge/deposit of fish, fish parts, chumming materials or bait would be allowed as long as it occurred during the conduct of lawful fishing activities within the sanctuary.
2. The discharge/deposit of clean effluent generated incidental to vessel use and generated by a Type I or II marine sanitation device approved by the United States Coast Guard in accordance to section 312 of the Federal Water Pollution Control Act, as amended, (FWPCA; 33 U.S.C. 1322) would be allowed for vessels less than 300 gross registered tons (GRT) or for vessels 300 GRT or above without sufficient holding tank capacity to hold sewage while within the sanctuary.
3. The discharge/deposit of clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, anchor wash, vessel engine or generator exhaust from all vessels, including cruise ships, would be allowed. An additional exception of clean vessel deck wash down would apply to all vessels other than cruise ships. The discharge/deposit of oily waste from bilge pumping would be prohibited from any vessel if the waste contained any detectable levels of harmful matter. In this case, a detectable level of oil would be interpreted to include anything that produced a visible sheen.

Prohibition on Construction on and Alteration to the Seabed

NOAA proposes to extend to the proposed expansion area for GFNMS a provision that would prohibit constructing any structure other than a navigation aid on or in the submerged lands of the Sanctuary; placing or abandoning any structure on or in the submerged lands of the Sanctuary; or drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary in any way. This provision would include four existing exceptions to this prohibition: (1) Anchoring vessels; (2) while conducting lawful fishing activities; (3) routine maintenance and construction of docks and piers on Tomales Bay; or (4) mariculture activities conducted pursuant to a valid lease, permit, license or other authorization issued by the State of California.

Prohibit the Take and Possession of Certain Species

NOAA proposes to extend to the proposed expansion area for GFNMS an existing provision that would prohibit the taking or possession of any marine mammal, sea turtle or bird within or above the sanctuary unless it is authorized by the Marine Mammal Protection Act, as amended, (MMPA; 16 U.S.C. 1361 et seq.), Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 et seq., Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 et seq., or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA. A description of the impacts of this regulation can be found in the discussion of the proposed action in

the DEIS published concurrently with this proposed rule.

Prohibit the Disturbance of Historic Resources

NOAA proposes to extend to the proposed expansion area for GFNMS an existing provision that would prohibit possessing, moving, removing, or injuring, or attempting to possess, move, remove or injure a sanctuary historical resource in the sanctuary. A description of the impacts of this regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

Prohibit the Introduction of Introduced Species

Currently, the introduction of introduced species is prohibited in the federal waters of GFNMS, with the exception of catch and release of striped bass (*Morone saxatilis*). In a separate rulemaking, NOAA proposed to amend the regulation pertaining to introduced species (79 FR 17073). This separate rulemaking would provide an exception for the introduction of non-native shellfish species for cultivation by mariculture activities in Tomales Bay, if such activity is specifically authorized by any valid Federal, State, or local lease, permit, license, approval, or other authorization and subsequently authorized by the sanctuary pursuant to 15 CFR 922.49 and 922.82. It would also give NOAA the ability to consider and authorize new or amended existing operations of commercial mariculture activities in state waters involving certain introduced species of shellfish that are determined to be non-invasive, including in Tomales Bay.

With this action, NOAA proposes to extend to the proposed expansion area for GFNMS the existing provision that prohibits the introduction of introduced species in the sanctuary as well as the new provisions that will result from the ongoing separate rulemaking mentioned above.

Prohibit White Shark Attraction and Approach

NOAA proposes to extend to the proposed expansion area for GFNMS an existing provision that would prohibit attracting a white shark anywhere within GFNMS.

Prohibit the Desertion of Vessels

NOAA proposes to extend to the proposed expansion area for GFNMS an existing provision that would prohibit deserting a vessel aground, at anchor, or adrift in the Sanctuary. NOAA also proposes to extend to the proposed expansion area for GFNMS an existing provision that would prohibit leaving harmful matter aboard a grounded or deserted vessel in the GFNMS. A description of the impacts of this regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

Exemption for Department of Defense Activities

NOAA proposes to extend to the GFNMS expansion area an existing exemption for Department of Defense (DOD) activities necessary for national defense, provided such

activities are conducted on or prior to the effective date of GFNMS designation or GFNMS expansion. DOD activities necessary for national defense initiated after the effective date of designation or expansion could be exempted after consultation with the Sanctuary Superintendent, with authority delegated from the ONMS Director. DOD activities not necessary for national defense, such as routine exercises and vessel operations, would be subject to all prohibitions that apply to GFNMS.

Exemption for Emergencies

NOAA proposes to extend to the proposed expansion area for GFNMS a provision that would exempt from sanctuary regulations for activities necessary to respond to an emergency threatening life, property, or the environment.

Exemption for Permitted Activities

NOAA proposes to extend to the expanded area an exemption for activities that are permitted by the Sanctuary Superintendent, with authority delegated from the ONMS Director, in accordance with the permit issuance criteria found in 15 CFR 922.48 and 15 CFR 922.83. It is important to note that permits would only be available for activities that violate the regulations at 15 CFR 922.83(a)(2) through (a)(16). No permit could be issued for activities that violate 15 CFR 922.83(a)(1) which prohibit the exploration for, development, or production of oil, gas or minerals within the sanctuary. A Sanctuary Superintendent may issue a sanctuary permit to: (1) Further research or monitoring related to sanctuary resources and qualities; (2) further the educational value of the sanctuary; (3) further salvage or recovery operations; or (4) assist in managing the sanctuary.

Amend Existing Regulations

Regulations That Would Apply to Both Existing Sanctuary and Proposed Expansion Area

Prohibition on Oil, Gas, or Minerals Exploration

NOAA is proposing to extend the current GFNMS regulations pertaining to oil and gas exploration, development, and production to the proposed expanded area, as well as making some amendments to the regulation that would apply both to the current GFNMS as well as the proposed expanded area, as described below.

1. NOAA is proposing to amend the current GFNMS regulation to also prohibit exploring for, developing, or producing minerals within the current boundary as well as the expansion area of GFNMS to be consistent with CBNMS and Monterey Bay National Marine Sanctuary, which are both adjacent to and abutting GFNMS. No commercial exploration, development, or production of minerals is currently conducted, nor is such activity anticipated in the near future.

2. NOAA is proposing to remove the exception for laying pipelines related to hydrocarbon operations adjacent to the sanctuary. There are no existing or proposed oil or gas pipelines in the vicinity and no currently planned or reasonably foreseeable

oil or gas development projects or leases that would necessitate pipelines. Should an oil or gas pipeline be proposed in the future, the new proposed authorization process (described below) could be used to allow such a use.

Prohibition on Certain Discharges

The discharge/deposit of graywater as defined by section 312 of the FWPCA by vessels less than 300 GRT, or vessels 300 GRT or greater without sufficient holding tank capacity to hold graywater while within the sanctuary would be excepted from the discharge prohibition. This new exception is intended to allow small vessels producing a small amount of clean graywater to continue operating within the sanctuary. This new exception would not apply to cruise ships. It would allow some vessels to discharge clean graywater within the sanctuary (which is currently prohibited) as well as in the proposed expansion area. Since the sanctuary would be expanded and the adjacent CBNMS would be expanded, the larger area may make it difficult for some larger vessels lacking holding capacity to hold graywater discharges while transiting through the sanctuaries. By allowing this discharge, non-cruise ship vessels would not be forced to hold all graywater and would have the option of discharging clean graywater in the sanctuary, consistent with the existing provisions in MBNMS and state and federal regulations. However, larger vessels greater than 300 GRT that have holding capacity would be prohibited from discharging gray water anywhere in the sanctuary.

This rule would extend to the proposed expansion area for GFNMS an existing provision that also prohibits the discharge/deposit originating outside the boundary of GFNMS that subsequently would enter the sanctuary and injure a sanctuary resource or quality. This existing regulation would be applied to the expansion area with the addition of the exception for a vessel less than 300 GRT or a vessel 300 GRT or greater without sufficient holding capacity to hold the graywater while within the Sanctuary, as mentioned above. A description of the impacts of this regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

Modification of the Prohibition on Operating Motorized Personal Watercraft

GFNMS regulations prohibit the operation of all motorized personal watercraft (MPWC), except for emergency search and rescue missions or law enforcement operations (other than routine training activities) carried out by the National Park Service, U.S. Coast Guard, Fire or Police Departments or other Federal, State or local jurisdictions. MPWC, which are often referred to as “jetskis”® or simply “skis,” include several small vessel designs that share similar performance characteristics. NOAA has restricted the use of MPWC within various sanctuaries when MPWC operation poses a unique and significant threat of disturbance to sanctuary habitats and wildlife through repetitive operation within sensitive environments. NOAA’s assessments of MPWC impacts indicate that unrestricted access to all

reaches of the sanctuary by such craft are likely to pose a threat to wildlife and other ocean users. Some MPWC operators commonly accelerate and decelerate repeatedly and unpredictably, travel at rapid speeds directly toward shore, and may maneuver close to rocks. Thus wildlife disturbance impacts from MPWC tend to be more likely than those from motorboat use, due to impacts in ecologically sensitive areas, often in nearshore locations. More detailed information on the impacts of MPWC can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

NOAA proposes to extend the current regulation to the proposed expanded area, but would modify it to allow for the use of a MPWC equipped with a functioning Global Positioning System (GPS) unit within four newly designated zones within the sanctuary expansion area, as described in the next section.

Regulations That Would Apply Only to Existing Sanctuary Area

Prohibit Low Flying Aircraft in Designated Zones

Currently NOAA prohibits disturbing marine mammals or seabirds by flying motorized aircraft at less than 1,000 feet over the waters within one nautical mile of the Farallon Islands, Bolinas Lagoon, or any Area of Special Biological Significance (ASBS, see description below), except to transport persons or supplies to or from the Islands or for enforcement purposes. NOAA presumes that a failure to maintain a minimum altitude of 1,000 feet above ground level over such waters disturbs marine mammals or seabirds. NOAA is proposing to rename the areas of overflight regulation “Special Wildlife Protection Zones” (SWPZs) and make small changes to the areas of overflight regulation within the existing boundaries of GFNMS. The new SWPZs would implement restrictions to disturbing marine mammals or seabirds by flying a motorized aircraft as well as to the sailing of cargo vessels. In this section, NOAA describes changing the zones from using existing state designated Areas of Special Biological Significance and specific area names to a new slightly modified configuration of Special Wildlife Protection Zones; NOAA describes overflight regulations below and describes the restrictions to cargo vessel use in a separate section below. A map of the zones under consideration may be found in the DEIS posted online at http://farallones.noaa.gov/manage/expansion_cbgf.html.

1. NOAA is proposing to no longer use the location of State-designated ASBS to define the areas where the low flying aircraft prohibition applies. Instead, NOAA would designate SWPZs as defined below. NOAA would delete the definition of ASBS in sanctuary regulations, although those areas are designated by the state of California for water quality purposes and they would continue to exist in that capacity. The existing GFNMS regulations use a combination of specified locations and State ASBS to protect sensitive seabird and pinniped areas from cargo vessel disturbance or discharge, and from low flying aircraft

disturbance. ASBS are those areas designated by California's State Water Resources Control Board as requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. ASBS are a subset of State Water Quality Protection Areas established pursuant to California Public Resources Code section 36700 *et seq.* These areas were designated based on the presence of certain species or biological communities that, because of their value or fragility, deserve special protection by preserving and maintaining natural water quality conditions to the extent practicable. Within the existing GFNMS boundaries, ASBS coincide with areas of high biological diversity and/or abundance of species, which is why NOAA originally prohibited low overflights above these ASBS areas and within one nautical mile of the edge of their boundaries. However, the ASBS in the expansion area are not in locations that would provide adequate protection to wildlife if used for low flying aircraft prohibitions. Therefore, NOAA is proposing to standardize the nomenclature for the zones where low overflight is prohibited by naming all of them SWPZs in both the existing sanctuary and the proposed expansion area.

2. Instead of continuing to use ASBS boundaries with a one nautical mile buffer and other specified locations, the new proposed regulation would prohibit disturbing marine mammals or seabirds by flying motorized aircraft at less than 1000 feet over the waters within the newly designated SWPZs (except to transport persons or supplies to or from the Farallon Islands or for enforcement purposes.) Failure to maintain a minimum altitude of 1000 feet above ground level over such waters would still be presumed to disturb marine mammals or seabirds. This presumption of disturbance could be overcome by contrary evidence that disturbance did not, in fact, occur (e.g., evidence that no marine mammals or seabirds were present in the area at the time of the low overflight).

3. SWPZs would be defined as areas of high biological diversity and/or abundance of species including federally listed and specially protected species. In particular these areas are white shark, seabird, and marine mammal (pinniped) "hotspots". White shark hotspots contain globally significant concentrations of white sharks. Seabird hotspots are areas with large historic populations, species diversity, and high concentration of nesting and roosting birds. Pinniped hotspots provide critical habitat for pupping seals and sea lions. In the proposed new boundaries for GFNMS, SWPZs would be established where such hotspots are susceptible to disturbance by low flying aircraft, cargo vessel operations, or in the case of white sharks, tourism vessels. Therefore, SWPZs are proposed to better encompass areas needing protection from certain human activities and to provide consistency between the existing and proposed areas of GFNMS.

4. There would be a total of five SWPZs in the current sanctuary boundaries coinciding with previous state ASBS boundaries, which were previously used to delineate the areas

subject to prohibitions on low flying aircraft: Tomales Point, Point Reyes, Duxbury Reef-Bolinas Lagoon, and two zones at the Farallon Islands. In the existing sanctuary boundaries, the proposed boundaries of the SWPZs would remain similar in size and location to the areas currently protected from low flying aircraft. The shape would change from circles to polygons and would be delineated around known points, islands and landmarks, instead of following ASBS boundaries with either one or two nautical mile buffers. The proposed changes are designed to aid compliance with the low overflight restriction zones by allowing for visual recognition of the zones from the air. The proposed new SWPZs would result in a slight increase in zone size for some areas and a decrease in size in other areas as defined below. For the Tomales Point zone, SWPZ 3, the boundaries would encompass the area within the sanctuary surrounding Tomales Point and the northern portion of Tomales Bay to the east shore at Toms Point, and north to Estero de San Antonio. The proposed change would increase the area by approximately 5 square miles. However, it would only increase the time an aircraft would have to stay above 1,000 feet by approximately 35 seconds if traveling at a speed of 120 miles per hour, assuming the flight line is roughly parallel to the coast. For the Point Reyes zone, SWPZ 4, the boundaries would encompass the area within the sanctuary surrounding Point Reyes. This change in shape would increase area by approximately 1.8 square miles, but it would not increase the time an aircraft would have to stay above 1,000 feet if traveling at a speed of 120 miles per hour. For the Duxbury Reef-Bolinas Lagoon zone, SWPZ 5, the boundary would encompass all of Bolinas Lagoon, but not Seadrift Lagoon, and extend west to Bolinas Bay, south to Rocky Point and north to Millers Point. The proposed change would increase area by approximately 4.5 square miles and increase the time an aircraft would have to stay above 1,000 feet by approximately 20 seconds if traveling at a speed of 120 miles per hour. The Southeast Farallon Islands Zone, SWPZ 6, extends approximately 1 nautical mile seaward of Southeast Farallon Island and Maintop Island. The proposed change would decrease the area by approximately 2.2 square miles and decrease the time an aircraft would have to stay above 1,000 feet by approximately 60 seconds if traveling at a speed of 120 miles per hour. The North Farallon Islands Zone, SWPZ 7, extends approximately 1 nautical mile seaward of North Farallon Island and Isle of St. James. The proposed change would increase the area by approximately 1.4 square miles, but would not increase the time an aircraft would have to stay above 1,000 feet if traveling at a speed of 120 miles per hour. Using points, landmarks and islands changes the shape of the five existing zones from circular to a polygon. However, the zones encompass the same wildlife hotspots as the current zones and NOAA believes such small changes in size of the new SWPZs would be inconsequential when flying an aircraft due to the short amount of additional flight time in which it would result. Also, the change in shape and the use of known points, islands

and landmarks, which can be identified from the air would likely facilitate compliance from pilots. Therefore, NOAA estimates that this proposed change in boundaries would result in a negligible change of operations for low flying aircrafts above the existing sanctuary.

Prohibit Cargo Vessels in Designated Zones

Currently NOAA prohibits cargo vessels from transiting closer than two nautical miles of the Farallon Islands, Bolinas Lagoon, or any ASBS to prevent wildlife disturbance and minimize the risk of oil spills in these areas. NOAA is proposing to amend the current prohibition on cargo vessels transiting close to sensitive wildlife areas in the sanctuary to the proposed expanded area with the following two changes. A map of the zones under consideration may be found in the DEIS posted online at http://farallones.noaa.gov/manage/expansion_cbgf.html. NOAA would replace the current zones including a two-nautical-mile buffer around the Farallon Islands, Bolinas Lagoon, or any ASBS with SWPZs that would extend 1 nautical mile into the same waters. Cargo vessels would be required to sail at least one nautical mile from any SWPZ. Although the new proposed regulation would change the buffer in the existing zones from two nautical miles to one nautical mile, the proposed new SWPZs would encompass the same areas that were previously identified in the regulations. Therefore, the proposed new cargo vessel prohibition would remain similar in size and location to the areas currently protected from cargo vessels.

As proposed, the cargo vessel prohibition zones in the existing sanctuary (which would encompass an area covering the SWPZs as well as a one-mile buffer around them) would be very similar to the areas currently protected from transiting cargo vessels, meaning that overall size and location of the zones would not significantly differ from the existing protected areas. The changes to the areas in the existing sanctuary would result in a total area that would only be 6.4 square miles larger than the existing cargo vessel prohibition zones. Therefore, this proposed change in the current boundaries would result in a negligible change for transiting cargo vessels.

Prohibit White Shark Attraction and Approach

NOAA also prohibits approaching within 50 meters of a white shark within 2 nautical miles of the Farallon Islands to prevent harassment and to reduce wildlife disturbance to white sharks. The proposed rule would amend the approach regulation in the current GFNMS regulations, as described below.

1. NOAA is proposing to refine and further delineate the zone in which it is prohibited to approach a white shark within 2 nautical miles of the Farallon Islands by creating two zones that encompass both the Southeast and North Farallon Islands. The location and size of the zones would effectively remain similar to the current prohibition at both the Southeast and North Farallon Islands, however, the area around Middle Farallon Island would be removed resulting in a total area that is smaller than the existing zone.

The previous zone was circular and surrounded all the Farallon Islands. The two new zones would be changed to a polygon and match the cargo vessel prohibition zones by creating a one nautical mile buffer around proposed SWPZs 6 and 7. The proposed regulation would prohibit disturbing white sharks by approaching within 50 meters of a white shark while within one nautical mile of, and inside, the newly designated SWPZs 6 and 7 around Southeast and North Farallon Islands. Middle Farallon Island would not be included in the approach prohibition. Middle Farallon Island is not considered to be a location of primary food source (i.e., pinnipeds) for white sharks. According to data collected by Point Blue Conservation Science (1987–2011) only one confirmed white shark predation event has occurred near middle Farallon Island during the fall season. Only a small number (30 or less) of sea lions are able to haul out on Middle Farallon Island at a time. In 2011, island biologists observed a shark thrashing several times over a number of hours, but no carcass or blood was ever observed, therefore the attack was not confirmed. Additionally, researchers and tourism operators have not been observed or reported in their logs approaching white sharks near Middle Farallon Island.

2. SWPZs 6 and 7 would be the only two SWPZs in the current sanctuary boundaries where approaching white sharks would be prohibited. The proposed boundaries of the new SWPZs are very similar to the areas currently protected from approaching white sharks around the Southeast and North Farallon Islands meaning that overall size and location would generally be the same as the existing protected areas. The combined area of the current white shark protection zone is approximately 52.3 square miles. The combined area of the two new white shark protection zones would be approximately 47.7 square miles. This is a reduction of 4.6 sq mi or approximately 10% of the current area, but that reduction is due to the removal of the Middle Farallon Island from the zone. Therefore, NOAA believes this proposed change in boundaries would result in a negligible change for researchers and tourism operators in the existing sanctuary, and that the reconfiguration of SWPZs would result in more effective resource protection.

Technical Changes to Boundaries

Minor technical changes were needed for the textual descriptions and point locations of the No-Anchoring Seagrass Protection Zones in Tomales Bay. Metric values (hectares and meters) were converted to English units to be consistent with the rest of the document. All zones with a shoreline component to their boundary are now described in language that complies with current ONMS conventions for boundary descriptions. In addition to modifying the text, the index numbers of some coordinate pairs were reordered and some coordinates were modified to accommodate the edited text. No change was made to the existing zone locations or areas, except that the boundary coordinates of Zone 5 were modified slightly so that the zone better align with GFNMS boundaries. Therefore, this proposed rule would correct minor errors

and incorporate these changes without significantly altering the size or location of the seagrass protection zones.

Regulations That Would Apply Only to Proposed Expansion Area

Motorized Personal Watercraft Zones

Operation of MPWC would be allowed only within four designated zones within the proposed expansion area and would limit access to the nearshore. The proposed regulations specify that an operable GPS unit in working condition must be carried on all MPWC accessing each zone in order to accurately and precisely navigate to MPWC zones and to ensure that the MPWC stays within the designated zones. The proposed action would allow use of MPWC in areas totaling 33.4 square nautical miles. A map of the zones under consideration may be found in the DEIS posted online at http://farallones.noaa.gov/manage/expansion_cbgf.html.

The sites of the four zones have been specifically proposed to minimize or prevent impacts on nearshore wildlife, and to protect known wildlife hotspots (which include areas of high biological diversity or abundance of species) or federally listed and specially protected species, while still allowing access to important recreational areas for surfing and where species of concern have a low likelihood of disturbance. Access to the proposed zones by conventional vessels would continue unchanged.

NOAA is proposing three year-round MPWC use zones and one seasonal MPWC zone within the GFNMS expansion area. Zone 1 is approximately 8.5 square miles and is proposed from latitude 39 to Arena Cove. This seasonal zone would be open from October through February. It would be closed from March through September to limit potential negative interactions with MPWC landing on Manchester Beach during the time Snowy Plovers, listed as threatened by the Endangered Species Act, nest on beaches. Zone 2 is approximately 26.2 square miles and is proposed from Arena Cove to Havens Neck. Prominent visual markers at Arena Cove, Moat, Saunders Landing, Iverson Landing and Haven's Neck would be used to define the eastern boundary. The proposed zone would require MPWC users to stay seaward of all the listed points at all times. Use of waypoints at each of the shoreside locations would help operators with compliance. Zone 3 is approximately 3.8 square miles and is offshore of Timber Cove. Zone 3 would be accessed through a boat ramp at Timber Cove. Zone 4 is approximately 6.1 square miles including the access route area and is proposed offshore of Bodega Head to Coleman Beach. A 100-yard access route from Bodega Harbor using the harbor entrance and two navigational buoys would allow entrance to the southern boundary of the zone. Seasonal access would also be available through Salmon Creek, at Bean Avenue and the Ranger Station.

NOAA is not proposing to change the definition of MPWC used by current GFNMS regulations in this proposed rule. However, NOAA has proposed to consolidate and standardize definitions that are common to

all sanctuaries (including modifications to definition of MPWC) in a separate rulemaking (78 FR 5998) published January 28, 2013. The reasoning behind and impacts of this proposal are being analyzed as part of the separate rulemaking with a separate public review process. A final rule is currently in development for this separate action.

Prohibit Low Flying Aircraft in Designated Zones

NOAA proposes to prohibit disturbing marine mammals or seabirds by flying motorized aircraft at less than 1,000 feet over the waters within one nautical mile of SWPZs except for enforcement purposes. Similar to the current regulations applying to the existing sanctuary, NOAA would presume that a failure to maintain a minimum altitude of 1,000 feet above ground level over such waters disturbs marine mammals or seabirds. NOAA is proposing to add two discrete SWPZs with overflight restrictions in the proposed expanded area, as described below. The new SWPZs would implement restrictions to disturbing marine mammals or seabirds by flying a motorized aircraft as well as to the sailing of cargo vessels. In this section, NOAA describes the effect of the new SWPZs to low overflight regulations and describes the restrictions to cargo vessel use in the following section.

SWPZs would be defined as areas of high biological diversity and/or abundance of species including federally listed and specially protected species. In particular these areas are white shark, seabird, and marine mammal (pinniped) "hotspots". White shark hotspots contain globally significant concentrations of white sharks. Seabird hotspots are areas with important populations, species diversity, and which support a high concentration of nesting and roosting birds. Pinniped hotspots provide vital habitat for pupping seals and sea lions. In the proposed new boundaries for GFNMS, SWPZs would be established where such hotspots are susceptible to disturbance by low flying aircraft, cargo vessel operations, or in the case of white sharks, tourism vessels. Therefore, SWPZs are proposed to better encompass areas needing protection from certain human activities and to provide consistency between the existing and proposed areas of GFNMS.

Two new SWPZs would be created in the proposed expansion area. The first zone, SWPZ 1, would extend south along the coast from Havens Neck in Mendocino County approximately 10 miles to Del Mar Point in Sonoma County and from the Mean High Water Line approximately 1.75 miles seaward. The size of the zone would be approximately 10.5 square miles. The overflight time would be about 200 seconds (3.33 minutes) for an aircraft traveling at 120 miles per hour. SWPZ 1 would include observed pinniped haul-out areas, 3 species of breeding seabird colonies and one roosting seabird species at Fish Rocks; and observed pinniped haul-out areas and 5 species of breeding seabirds at Gualala Point Island. The second zone, SWPZ 2, would extend south along the coast from Windermere Point, north of the Russian River in Sonoma County, approximately 14 miles to Duncans

Point and from the Mean High Water Line approximately 1.85 miles seaward. The size of the zone would be approximately 21.4 square miles. The overflight time would be about 375 seconds (6.25 minutes) for an aircraft traveling at 120 miles per hour. SWPZ 2 would include observed Steller Sea Lion haul out areas at Northwest Cape (Fort Ross); and harbor seal haul out areas and 5 species of breeding seabirds throughout the entire Russian River Colony Complex, which is a system of offshore rocks north and south of the Russian River. The seven zones would include 11 seabird hotspots and 9 pinniped hotspots within the existing sanctuary and the proposed sanctuary expansion area. Many of these "hotspots" are "colony complexes" which means that the area may include cliffs (used by seabirds), clusters of rocks, or tidal mudflat islands (used by pinnipeds). The combined area for all 7 SWPZs would cover 2.77% of sanctuary waters (approximately 91.5 square miles).

Prohibit Cargo Vessels in Designated Zones

Currently NOAA prohibits cargo vessels from transiting closer than two nautical miles of the Farallon Islands, Bolinas Lagoon, or any ASBS to prevent wildlife disturbance and minimize the risk of oil spills in these areas. NOAA is proposing to extend the current prohibition on cargo vessels transiting close to sensitive wildlife areas in the sanctuary to the proposed expanded area by proposing a total of two new cargo prohibition zones in the proposed expansion area.

The two proposed new cargo vessel restriction zones in the proposed expansion area would be based on the proposed SWPZs, as described above. Combined area of new proposed cargo vessel zones in expansion area would be approximately 61.7 square miles. These two new SWPZs would be inshore of known cargo vessel traffic routes, therefore NOAA does not expect them to interfere significantly with current cargo vessel traffic.

Add New Regulations

Prohibit Interference With an Investigation

NOAA proposes to add a new regulation to enhance an existing statutory prohibition on interfering with, obstructing, delaying, or preventing an investigation, search or seizure in connection with an enforcement action related to the National Marine Sanctuaries Act (NMSA; 16 U.S.C. 1431 et seq.).

Exemption for Authorized Activities

Current GFNMS permit regulations do not allow NOAA to authorize any prohibited activity other than through the issuance of a national marine sanctuary permit. With this action, NOAA is proposing to add to GFNMS regulations the authority to authorize certain activities such as the discharge, construction, drilling, dredging or other disturbance on submerged land, taking and possessing a marine mammal, sea turtle, or bird, and possessing historical resources, as long as those activities are permitted or licensed by another federal, State, or local agency, and as long as the applicant complies with any terms and conditions deemed necessary to protect sanctuary resources and qualities. In addition, NOAA is proposing as part of a

separate rulemaking to add to GFNMS regulations the authority to authorize new or amended existing operations of commercial mariculture activities in state waters involving certain introduced species of shellfish that are determined to be non-invasive (79 FR 17073). In the case of authorization, the activity would have to comply with such terms, but would not have to fit within the categories of activities for which a sanctuary permit may be obtained. The activities would have to be authorized by the Sanctuary Superintendent, with authority delegated from the ONMS Director, under 15 CFR 922.83(d) and 15 CFR 922.49. This authorization provision is similar to that in the existing regulations for MBNMS and five other national marine sanctuaries. The Sanctuary Superintendent may also deny an authorization or condition an approval to protect sanctuary resources.

The exemption for authorized activities in this proposed rule would result in a new management authority in GFNMS as it currently stands as well as in the proposed expanded sanctuary.

In addition, NOAA is proposing to amend in the GFNMS regulations the explanation of the procedure by which preexisting leases, permits, licenses, or rights of subsistence use or access applying to the expansion area and in existence on the effective date of the sanctuary expansion may be certified (see 15 CFR 922.84), to clarify that the certification process would only be in place in the expansion area.

Cordell Bank National Marine Sanctuary Regulations

This section describes the changes NOAA is proposing to make to the regulations for CBNMS to implement the proposed expansion of the sanctuary, which is the basis for this rulemaking. It is organized by type of regulatory amendments as follows:

- It includes proposed changes to the boundary description;
- It would apply existing regulations without changes to the proposed expansion area for certain regulations and exceptions related to discharge, prohibiting oil, gas and minerals exploration, taking and possessing certain species, introducing introduced species, exemptions for Department of Defense and emergency response, permit criteria and requirements, and issuance of emergency regulations;
- It would amend an existing regulation regarding graywater discharge and apply it to both the existing sanctuary and proposed expansion area;
- It would add new regulations related to disturbing historical resources, interference with an investigation and the ability for NOAA to authorize certain activities otherwise prohibited.

Boundary Expansion

NOAA is proposing to modify the boundary of CBNMS. The proposed new boundary for CBNMS would increase the size of the sanctuary from approximately 528 square miles (399 nautical square miles) to 1,286 square miles (971 nautical square miles) and would include the waters and submerged lands north and west of the

current sanctuary. The larger boundary for CBNMS would include Bodega Canyon, a significant bathymetric feature that contributes directly to the biological productivity of the existing sanctuary ecosystem but is not currently part of CBNMS. Submarine canyons support deep water communities and affect local and regional water circulation patterns. The eastern and northern boundaries of CBNMS would be coterminous with GFNMS.

Extension of Existing Regulations Without Changes to Proposed Expansion Area

Prohibition on Certain Discharges

Generally, discharging or depositing any material or other matter from within or into the sanctuary are prohibited in the existing sanctuary and would be prohibited in the proposed expansion area as well. The exceptions currently in place for some activities would apply in the proposed expansion area as well and are described below. The prohibition would apply not only to discharges and deposits originating in the sanctuary (e.g., from vessels in the sanctuary), but also, for example, from discharges and deposits occurring above the sanctuaries. A description of the impacts of this discharge regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule. NOAA is proposing to extend the following exceptions to the CBNMS discharge/deposit prohibition to the expansion area:

1. The discharge/deposit of fish, fish parts, chumming materials or bait would be allowed as long as they were made during the conduct of lawful fishing activities within the sanctuary. This existing regulation would be applied to the expansion area without amendment. A description of the impacts of this regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

2. The discharge/deposit of clean effluent generated incidental to vessel use and generated by a Type I or II marine sanitation device approved by the United States Coast Guard in accordance to section 312 of the Federal Water Pollution Control Act, as amended, (FWPCA; 33 U.S.C. 1322) would be allowed for vessels less than 300 gross registered tons (GRT) or for vessels 300 GRT or above without sufficient holding tank capacity to hold sewage while within the sanctuary. This existing regulation would be applied to the expansion area without amendment. A description of the impacts of this regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

3. The discharge/deposit of clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, anchor wash, vessel engine or generator exhaust from all vessels, including cruise ships, would be allowed. An additional exception of clean vessel deck wash down would apply to all vessels other than cruise ships as defined above in the existing sanctuary and the expansion area. The discharge/deposit of oily waste from bilge pumping would be prohibited from any vessel if the waste contained any detectable levels of harmful

matter. In this case, a detectable level of oil would be interpreted to include anything that produced a visible sheen. A description of the impacts of this regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

Prohibit Oil, Gas, or Minerals Exploration

NOAA is proposing to apply to the proposed expansion area for CBNMS an existing provision that would prohibit exploring for, developing or producing oil, gas, or minerals within CBNMS.

Prohibit the Take and Possession of Certain Species

NOAA is proposing to extend to the proposed expansion area for CBNMS an existing provision that prohibits the taking or possession of any marine mammal, sea turtle or bird within or above the sanctuary unless it is authorized by the Marine Mammal Protection Act, as amended, (MMPA; 16 U.S.C. 1361 et seq.), Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 et seq., Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 et seq., or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA. A description of the impacts of this regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

Prohibit the Introduction of Introduced Species

NOAA is proposing to extend to the proposed expansion area for CBNMS a provision that would prohibit introducing or otherwise releasing from within or into the sanctuary an introduced species, except striped bass (*Morone saxatilis*) released in the sanctuary during catch and release fishing. The rationale for this proposed regulation is the same as that for the proposed introduced species regulation for GFNMS.

Exemption for Department of Defense Activities

NOAA proposes to extend to the proposed expansion area for CBNMS the existing provision that would exempt the Department of Defense (DOD) from sanctuary regulations for activities carried out before the effective date of designation (for current CBNMS boundary) or before the effective date of expansion (for proposed expanded area) that are necessary for national defense. DOD activities necessary for national defense initiated after the effective date of designation (for current CBNMS boundary) or expansion date (for proposed expanded area) could be exempted after consultation between DOD and the Sanctuary Superintendent, with authority delegated from the ONMS Director. DOD activities not necessary for national defense, such as routine exercises and vessel operations, would be subject to all prohibitions that apply to CBNMS.

Exemption for Emergencies

NOAA proposes to apply to the proposed expansion area for CBNMS the existing exemption for activities necessary to respond to an emergency threatening life, property, or the environment.

Exemption for Permitted Activities

NOAA proposes to provide an exemption for activities that are permitted by the Sanctuary Superintendent, with authority delegated from the ONMS Director, in accordance with the permit issuance criteria found in 15 CFR 922.48 and 15 CFR 922.113. The Sanctuary Superintendent may issue a sanctuary permit to: (1) Further research or monitoring related to sanctuary resources and qualities; (2) further the educational value of the sanctuary; (3) further salvage or recovery operations; or (4) assist in managing the sanctuary. It is important to note that permits would only be available for activities that otherwise violate the regulations at 15 CFR 922.112, (a)(2) through (a)(7). No permit could be issued for activities that violate 15 CFR 922.112(a)(1), which prohibits the exploration for, development, or production of oil, gas or minerals within the sanctuary.

Provision for Emergency Regulation

NOAA proposes to extend to the proposed expansion area for CBNMS a provision that would allow NOAA to issue emergency regulations, within the limits of the NMSA, for no more than 120 days in order to prevent immediate, serious, and irreversible damage to a sanctuary resource.

Amend Existing Regulations

Regulations That Would Apply to Both Existing Sanctuary and Proposed Expansion Area

Prohibition on Certain Discharges

The discharge/deposit of graywater, as defined by section 312 of the FWPCA, by vessels less than 300 GRT, or vessels 300 GRT or greater without sufficient holding tank capacity to hold graywater while within the sanctuary would be excepted. This exception is intended to allow small vessels producing a small amount of waste to continue operating within the sanctuary. This exception would not apply to cruise ships, as defined above. This regulation does not currently exist in CBNMS; its promulgation would result in new sanctuary protection measure in both CBNMS as it currently stands as well as in the proposed expanded sanctuary. This new exemption would allow some vessels to discharge clean graywater within the sanctuary (which is currently prohibited) as well as in the proposed expansion area. However, larger vessels greater than 300 GRT that have holding capacity would be prohibited from discharging gray water anywhere in either sanctuary. A description of the impacts of this regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

This rule would extend to the proposed expansion area for CBNMS a provision that also prohibits the discharge/deposit originating outside the boundary of CBNMS that subsequently would enter the sanctuary and injure a sanctuary resource or quality. This existing regulation would be applied to the expansion area, with the addition of the exception for a vessel less than 300 GRT or a vessel 300 GRT or greater without sufficient holding capacity to hold the graywater while within the Sanctuary, as mentioned above. A

description of the impacts of this regulation can be found in the discussion of the proposed action in the DEIS published concurrently with this proposed rule.

Add New Regulations

Prohibit the Disturbance of Historic Resources

NOAA is proposing to prohibit the disturbance of, or attempts to disturb, a sanctuary historical resource. This modification would add protection to these fragile, finite, and non-renewable resources so they may be studied, and appropriate information may be made available for the benefit of the public. This rule would also prohibit the possession of a sanctuary historical resource, and would provide for comprehensive protection of sanctuary resources by making it illegal to possess historical resources in any geographic location. For example, this rule would make it illegal for anyone to possess an artifact taken from a shipwreck in CBNMS even if the individual is no longer in the sanctuary. While the presence of historical resources on Cordell Bank or in its surrounding waters is not known, such resources could exist. Since the proposed expanded sanctuary would be considerably larger in size, there may be submerged resources requiring protection that have yet to be discovered.

Prohibit Interference With an Investigation

NOAA proposes to add a new regulation to implement an existing statutory prohibition on interfering with, obstructing, delaying, or preventing an investigation, search or seizure in connection with an enforcement action related to the National Marine Sanctuaries Act (NMSA; 16 U.S.C. 1431 et seq.).

Exemption for Authorized Activities

Current CBNMS permit regulations do not allow the authorization of any prohibited activity other than through the issuance of a national marine sanctuary permit.

NOAA is proposing to add to CBNMS regulations the authority to authorize certain activities such as the discharge, construction, drilling, dredging or other disturbance on submerged land outside of the line representing the 50-fathom isobath around Cordell Bank, taking and possessing a marine mammal, sea turtle, or bird, and possessing historical resources, as long as those activities are permitted or licensed by another federal or State agency, and as long as the applicant complies with any terms and conditions deemed necessary to protect sanctuary resources and qualities. In the case of authorization, the activity would have to comply with such terms, but would not have to fit within the categories of activities for which a sanctuary permit may be obtained. The activities would have to be authorized by the Sanctuary Superintendent, with authority delegated from the ONMS Director, under 15 CFR 922.112(d) and 15 CFR 922.49. This authorization provision is similar to that in the existing regulations for MBNMS and five other national marine sanctuaries. The Sanctuary Superintendent may also deny an authorization or condition an approval to protect sanctuary resources.

The exemption for authorized activities in this proposed rule would result in a new

management authority in CBNMS as it currently stands as well as in the proposed expanded sanctuary.

IV. Classification

National Environmental Policy Act

NOAA has prepared a draft environmental impact statement to evaluate the environmental effects of the proposed rulemaking. Copies are available at the address and Web site listed in the ADDRESSES section of this proposed rule. Responses to comments received on this proposed rule will be published in the final environmental impact statement and preamble to the final rule.

Coastal Zone Management Act

Section 307 of the Coastal Zone Management Act (CZMA; 16 U.S.C. 1456) requires Federal agencies to consult with a state's coastal program on potential Federal regulations having an effect on state waters. NOAA will submit a copy of this proposed rule and supporting documents to the California Coastal Commission for evaluation of Federal consistency under the CZMA.

Executive Order 12866: Regulatory Impact

Under Executive Order 12866, if the proposed regulations are "significant," as defined in section 3(f) of the Order, an assessment of the potential costs and benefits of the regulatory action must be prepared and submitted to the Office of Management and Budget. This proposed rule has been determined to be not significant within the meaning of Executive Order 12866.

Executive Order 13132: Federalism Assessment

NOAA has concluded that this regulatory action does not have federalism implications sufficient to warrant preparation of a federalism assessment under Executive Order 13132.

Executive Order 13175: Tribal Consultation and Collaboration

Representatives from the Manchester Band of Pomo Indians, Kashia Band of Pomo Indians of Stewarts Point Rancheria, and Federated Indians of Graton Rancheria were invited in writing to consult with NOAA under Executive Order 13175. As of publication date of this notice of proposed rulemaking, NOAA has not received answers to the consultation letters. However, NOAA will continue to seek their participation in the development of this rulemaking.

Regulatory Flexibility Act

The Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration that this proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities. The factual basis for this certification is as follows:

The Small Business Administration has established thresholds on the designation of businesses as "small entities". A fish-harvesting business is considered a small business if has annual receipts not in excess of \$3.5 million (13 CFR 121.201). Sports and

recreation businesses and scenic and sightseeing transportation businesses are considered small businesses if they have annual receipts not in excess of \$6 million (13 CFR 121.201). According to these limits, each of the businesses potentially affected by the proposed rule, except those in the oil and gas and commercial marine transportation businesses would most likely be small businesses.

The analysis presented here is based on limited quantitative information on how much activity occurs within the boundaries of the proposed expansion areas for CBNMS and GFNMS, except for commercial fishing operations.

In 2013, NOAA conducted a study on the economic impact of California's commercial fisheries in all four California national marine sanctuaries, including the expansion area for the CBNMS and GFNMS. NOAA obtained commercial fishing data from the California Department of Fish and Wildlife (CDFW) for years 2000 to 2012. In 2012, there were a little over 200 fishing operations that made some catch from the CBNMS-GFNMS expansion area. These operations had harvest revenue of \$6.55 million (measured in 2013 dollars using the Consumer Price Index, which generated income (including multiplier impacts) of \$5.45 million and 246 full and part-time jobs.

Methodology. Due to the lack of quantitative data on the number of businesses directly affected by the proposed regulations and their levels of revenues, costs and profits from their activities in the CBNMS-GFNMS expansion area, the assessment here is qualitative.

Scales Used for Assessing Impacts. For assessing levels of impacts within an alternative, NOAA used three levels plus "no impacts". The three levels are "negligible", "moderate" and "high."

For levels of impacts within a proposed alternative, negligible means very low benefits, costs, or net benefits (less than 1% change). Moderate impacts would be more than 1% and less than or equal to 10%, and high impacts would be more than 10%. For market economic values (revenue, costs, and profits), negligible would mean no likely impact whereas moderate and high could mean some measurable impact on market economic values at the levels noted above. NOAA analyzed five regulatory alternatives (Proposed Action, No Action, Existing Regulations, Arena Cove Boundary, and Alternative Motorized Personal Watercraft (MPWC) Zones.) User groups that entail small businesses included commercial fishing operation, recreation-tourism related businesses, and land use and development businesses. Other user groups included in the full regulatory impact review and not included here are research and education, people who receive passive economic use value from improvements in natural resource qualities/quantities, businesses in offshore energy (oil and gas industry and alternative energy such as wave and wind energy firms) and those firms involved in marine transportation. Firms involved in offshore energy and marine transportation directly affected by the proposed regulations were judged not to be small businesses.

NOAA assessed three types of regulations included in the proposed action (discharges, submerged lands—seabed alterations, and introduced species), plus the impact of all regulations combined. Oil and gas regulations addressed in the full regulatory impact review are not discussed here since the oil and gas industry is judged not to involve small businesses.

Proposed Action

Discharge Regulations. Under the proposed rule, NOAA would require commercial fishing operations and businesses involved in providing guide services in the recreation-tourism industry (e.g. charter and party boat fishing operations and whale-watching or other wildlife observation or guide businesses) to hold and dispose of wastes prohibited by the regulations from discharge or deposit within the sanctuary until they are outside sanctuary boundaries. NOAA expects negligible costs from these regulations for all these operations. NOAA's proposed exemption for graywater discharges for vessels under 300 gross registered tons (GRT) or over 300 GRT but without sufficient holding tank capacity, would lessen the impact of the regulation in the sanctuary, and therefore would reduce the cost of compliance. NOAA expects both the commercial fishing industry and the recreation-tourism industry to receive moderate net benefits from these regulations in that habitat qualities would improve generating increased fish stocks for commercial and recreational fishing and improvements in the qualities that the recreation-tourism industry depends upon resulting in increased business revenues and profits. Thus, NOAA expects that the commercial fishing and recreation-tourism industries would benefit from the discharge regulations. NOAA expects the proposed action to generate a mid-range level of costs and mid-range levels of costs with a mid-range level of net benefits compared with all other regulatory alternatives. Land use and development businesses would not be directly affected by the discharge regulations.

Submerged lands—Seabed Alteration Regulations. Regulations prohibiting disturbances of the seabed would impact the commercial fishing industry, the recreation-tourism industry, and land use and development industry. NOAA expects all of these industries to receive moderate net benefits from these regulations because of the improvement or maintenance of habitat qualities that these industries depend upon. NOAA also expects businesses in these industries to experience negligible increases in costs of operations. The land use—development industry would be expected to benefit through increased property values. There are many examples in the economics literature showing that property values are enhanced when located near protected areas. Because of the exemptions, permit, and authorization processes in the proposed action, which may allow for some activities that disturb the seabed, costs are less than the alternative of extending existing regulations in the current sanctuaries to the proposed expansion area and would be expected to be in the mid-range of costs across all alternatives.

Introduced Species Regulations. Baiting and processing can be pathways for introduction of invasive species. The proposed action could potentially require commercial and recreational fishing operations to alter their baiting methods to reduce the likelihood for the introduction of invasive species into the proposed sanctuary expansion areas, but this is not likely because no known non-native species are currently being used as bait in these areas. No current operations involving fish processing vessels within the expansion area are known. NOAA expects the proposed action to limit competition between introduced and native species and provide ongoing stability to native populations of harvested species. Thus, NOAA expects these regulations to result in moderate benefits and net benefits to the commercial fishing industry, the recreation-tourism industry and businesses in the land use and development industry as habitat qualities are maintained or improved, while resulting in negligible costs to businesses in the commercial and recreational fishing industry. Again, the businesses in land use and development would benefit through enhanced property values. The proposed action is in the mid-range of benefits, costs and net benefits for the commercial fishing and recreation-tourism industry businesses across all regulatory alternatives, while land use and development would be expected to be in the mid-range of benefits and net benefits and no costs.

All Regulations. NOAA expects the combined effects of all of the regulations in the proposed action to generate moderate benefits and net benefits to businesses in all three industries, while imposing negligible costs. NOAA also expects the proposed action to result in a mid-range of benefits and net benefits to businesses in all three industries, while imposing next to the lowest costs across all regulatory alternatives analyzed in the draft environmental impact statement.

Because the impacts of this proposed rule on commercial fishing, recreational tourism, and land use and development businesses are minimal, the Chief Counsel for Regulation certified to the Chief Counsel for Advocacy at SBA that this rulemaking would not have a significant economic impact on a substantial number of small entities.

Paperwork Reduction Act

ONMS has a valid Office of Management and Budget (OMB) control number (0648–0141) for the collection of public information related to the processing of ONMS permits across the National Marine Sanctuary System. NOAA's proposal to expand GFNMS and CBNMS would likely result in an increase in the number of requests for ONMS general permits, special use permits, and authorizations due to the increase in the spatial extent of the applicable regulations for these sanctuaries and the addition of the authority to authorize other valid federal, state, or local leases, permits, licenses, approvals, or other authorizations. An increase in the number of ONMS permit requests would require a change to the reporting burden certified for OMB control

number 0648–0141. An update to this control number for the processing of ONMS permits would be requested as part of the final rule for sanctuary expansion.

Send comments regarding the burden estimate for this data collection requirement, or any other aspect of this data collection, including suggestions for reducing the burden, to NOAA (see **ADDRESSES**) and by email to OIRA_submission@omb.eop.gov, or fax to (202) 395–7285. Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB control number.

V. Request for Comments

NOAA requests comments on this proposed rule by June 30, 2014.

VI. References

A complete list of all references cited herein is available upon request (see **ADDRESSES** section).

List of Subjects in 15 CFR Part 922

Administrative practice and procedure, Coastal zone, Historic preservation, Intergovernmental relations, Marine resources, Natural resources, Penalties, Recreation and recreation areas, Reporting and recordkeeping requirements, Wildlife.

Dated: April 4, 2014.

Holly A. Bamford,

Assistant Administrator, for Ocean Services and Coastal Zone Management.

Accordingly, for the reasons discussed in the preamble, the National Oceanic and Atmospheric Administration proposes to amend 15 CFR part 922 as follows:

PART 922—NATIONAL MARINE SANCTUARY PROGRAM REGULATIONS

■ 1. The authority citation for part 922 continues to read as follows:

Authority: 16 U.S.C. 1431 *et seq.*

■ 2. Amend § 922.49 by revising paragraphs (a), (b), and (c) to read as follows:

§ 922.49 Notification and review of applications for leases, licenses, permits, approvals, or other authorizations to conduct a prohibited activity.

(a) A person may conduct an activity prohibited by subpart H, subparts K through P, or subpart R, if such activity is specifically authorized by any valid Federal, State, or local lease, permit, license, approval, or other authorization issued after the effective date of Sanctuary designation, or in the case of the Florida Keys National Marine

Sanctuary after the effective date of the regulations in subpart P, provided that:

* * * * *

(b) Any potential applicant for an authorization described in paragraph (a) of this section may request the Director to issue a finding as to whether the activity for which an application is intended to be made is prohibited by subpart H, subparts K through P, or subpart R, as appropriate.

(c) Notification of filings of applications should be sent to the Director, Office of Ocean and Coastal Resource Management at the address specified in subpart H, subparts K through P, or subpart R, as appropriate. A copy of the application must accompany the notification.

* * * * *

■ 3. Revise part 922 Subpart H to read as follows:

Subpart H—Gulf of the Farallones National Marine Sanctuary

§ 922.80 Boundary.

(a) Gulf of the Farallones National Marine Sanctuary (Sanctuary) encompasses an area of approximately 2,490 square nautical miles (3,297 square miles) of coastal and ocean waters, and submerged lands thereunder, surrounding the Farallon Islands and Noonday Rock along the northern coast of California. The precise boundary coordinates are listed in Appendix A to this subpart.

(b) The western boundary of the Sanctuary extends south from Point 1 approximately 45 nautical miles (52 miles) to Point 2, which is the northwestern corner of Cordell Bank National Marine Sanctuary (CBNMS). The Sanctuary boundary then extends from Point 2 approximately 38 nautical miles (43 miles) east along the northern boundary of CBNMS to Point 3, which is approximately 7 nautical miles (8 miles) west of Bodega Head. From Point 3 the Sanctuary boundary continues to south and west to Points 4 through Point 19 (in numerical sequence) and is coterminous with the eastern boundary of CBNMS. From Point 19 the Sanctuary boundary continues south and east to Points 20 through 25 (in numerical sequence) until it intersects the boundary for Monterey Bay National Marine Sanctuary (MBNMS) at Point 26. From Point 26 the Sanctuary boundary extends eastward and northward, coterminous with MBNMS, to Points 27 through 33 (in numerical sequence). From Point 33 the boundary proceeds along a straight line arc towards Point 34 until it intersects the Mean High Water Line at Rocky Point, California. From this intersection the Sanctuary

boundary follows the Mean High Water Line northward until it intersects the boundary for Point Reyes National Seashore approximately 0.7 nautical miles (0.8 miles) south and east of Bolinas Point in Marin County, California. The Sanctuary boundary then approximates the boundary for Point Reyes National Seashore, as established at the time of designation of the Sanctuary, to the intersection of the Point Reyes National Seashore boundary and the Mean High Water Line approximately 0.13 nautical miles (0.15 miles) south and east of Duck Cove in Tomales Bay. The Sanctuary boundary then follows the Mean High Water Line along Tomales Bay and Giacomini Wetland and up Lagunitas Creek to the U.S. Highway 1 Bridge. Here the Sanctuary boundary crosses Lagunitas Creek and follows the Mean High Water Line north to the Estero de San Antonio and up the Estero to the tide gate at Valley Ford-Franklin School Road. Here the Sanctuary boundary crosses the Estero de San Antonio and proceeds west and north following the Mean High Water Line to the Estero Americano and up the Estero to the bridge at Valley Ford-Estero Road. Here the Sanctuary boundary crosses the Estero Americano and proceeds west and north following the Mean High Water Line to the Salmon Creek Estuary. At the Salmon Creek Estuary the boundary continues along the Mean High Water Line of the southern shore of the Salmon Creek Estuary until it intersects a straight line arc connecting Point 35 and Point 36. At that intersection the boundary extends across the estuary towards Point 36 until it intersects the Mean High Water Line of the northern shore of the Salmon Creek Estuary. From this intersection the boundary follows the Mean High Water Line to the Russian River. At the Russian River the boundary continues along the Mean High Water Line of the southern shore of the Russian River until it intersects a straight line arc connecting Point 37 and Point 38. At that intersection the boundary extends across the river towards Point 38 until it intersects the Mean High Water Line of the northern shore of the Russian River. From this intersection the boundary follows the Mean High Water Line to the Gualala River. At the Gualala River the boundary continues along the Mean High Water Line of the southern shore of the Gualala River until it intersects a straight line arc between Point 39 and Point 40. At that intersection the boundary extends across the river towards Point 40 until it intersects the Mean High Water Line of the northern shore of the Gualala

River. From this intersection the boundary follows the Mean High Water Line to Arena Cove in Mendocino County. At Arena Cove the boundary continues along the Mean High Water Line of the southern shore of Arena Cove until it intersects a straight line arc connecting Point 41 and Point 42. At that intersection the boundary extends across the cove towards Point 42 until it intersects the Mean High Water Line of the northern shore of Arena Cove. From this intersection the boundary follows the Mean High Water Line north to the Garcia River. At the Garcia River the boundary continues along the Mean High Water Line of the southern shore of the Garcia River until it intersects a straight line arc connecting Point 43 and Point 44. At that intersection the boundary extends across the river towards Point 44 until it intersects the Mean High Water Line of the northern shore of the Garcia River. The Sanctuary boundary then continues to follow the Mean High Water Line until it intersects the rhumb line connecting Point 45 at Manchester Beach in Mendocino County, California and Point 46. From this intersection the Sanctuary boundary continues west along its northernmost extent to Point 46. The Sanctuary includes Bolinas Lagoon, Estero de San Antonio (to the tide gate at Valley Ford-Franklin School Road) and Estero Americano (to the bridge at Valley Ford-Estero Road), as well as Bodega Bay, but does not include Bodega Harbor, the Salmon Creek Estuary, the Russian River Estuary, the Gualala River Estuary, the portion of Arena Cove from the end of the pier eastward, or the Garcia River Estuary. Unless otherwise specified, where the Sanctuary boundary crosses a waterway, the Sanctuary excludes this waterway.

§ 922.81 Definitions.

In addition to those definitions found at § 922.3, the following definitions apply to this subpart:

Attract or attracting means the conduct of any activity that lures or may lure any animal in the Sanctuary by using food, bait, chum, dyes, decoys (e.g., surfboards or body boards used as decoys), acoustics or any other means, except the mere presence of human beings (e.g., swimmers, divers, boaters, kayakers, surfers).

Clean means not containing detectable levels of harmful matter.

Cruise ship means a vessel with 250 or more passenger berths for hire.

Deserting means leaving a vessel aground or adrift without notification to the Director of the vessel going aground or becoming adrift within 12 hours of its discovery and developing and

presenting to the Director a preliminary salvage plan within 24 hours of such notification, after expressing or otherwise manifesting intention not to undertake or to cease salvage efforts, or when the owner/operator cannot after reasonable efforts by the Director be reached within 12 hours of the vessel's condition being reported to authorities; or leaving a vessel at anchor when its condition creates potential for a grounding, discharge, or deposit and the owner/operator fails to secure the vessel in a timely manner.

Harmful matter means any substance, or combination of substances, that because of its quantity, concentration, or physical, chemical, or infectious characteristics may pose a present or potential threat to Sanctuary resources or qualities, including but not limited to: Fishing nets, fishing line, hooks, fuel, oil, and those contaminants (regardless of quantity) listed pursuant to 42 U.S.C. 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act at 40 CFR 302.4.

Introduced species means any species (including, but not limited to, any of its biological matter capable of propagation) that is non-native to the ecosystems of the Sanctuary; or any organism into which altered genetic matter, or genetic matter from another species, has been transferred in order that the host organism acquires the genetic traits of the transferred genes.

Motorized personal watercraft means any vessel, propelled by machinery, that is designed to be operated by standing, sitting, or kneeling on, astride, or behind the vessel, in contrast to the conventional manner, where the operator stands or sits inside the vessel; any vessel less than 20 feet in length overall as manufactured and propelled by machinery and that has been exempted from compliance with the U.S. Coast Guard's Maximum Capacities Marking for Load Capacity regulation found at 33 CFR Parts 181 and 183, except submarines; or any other vessel that is less than 20 feet in length overall as manufactured, and is propelled by a water jet pump or drive.

Routine maintenance means customary and standard procedures for maintaining docks or piers.

Seagrass means any species of marine angiosperms (flowering plants) that inhabit portions of the submerged lands in the Sanctuary. Those species include, but are not limited to: *Zostera asiatica* and *Zostera marina*.

Special Wildlife Protection Zones are areas of high biological diversity and/or abundance of species that are susceptible to disturbance, including

federally listed and specially protected species. In particular these areas are white shark, seabird and marine mammal (pinniped) "hotspots". White shark "hotspots" are where there are globally significant concentrations of white sharks. Seabird "hotspots" are areas with important populations, species diversity, and which support high concentration of nesting and roosting birds. Pinniped "hotspots" provided vital habitat for pupping seals and sea lions. Special Wildlife Protection Zones are established where "hotspots" are susceptible to disturbance and their coordinates are found in Appendix D of this Subpart.

§ 922.82 Prohibited or otherwise regulated activities.

(a) The following activities are prohibited and thus are unlawful for any person to conduct or to cause to be conducted within the Sanctuary:

(1) Exploring for, developing, or producing oil, gas or minerals.

(2) Discharging or depositing from within or into the Sanctuary, other than from a cruise ship, any material or other matter except:

(i) Fish, fish parts, chumming materials or bait used in or resulting from lawful fishing activities within the Sanctuary, provided that such discharge or deposit is during the conduct of lawful fishing activity within the Sanctuary;

(ii) For a vessel less than 300 gross registered tons (GRT), or a vessel 300 GRT or greater without sufficient holding tank capacity to hold sewage while within the Sanctuary, clean effluent generated incidental to vessel use by an operable Type I or II marine sanitation device (U.S. Coast Guard classification) that is approved in accordance with section 312 of the Federal Water Pollution Control Act, as amended (FWPCA), 33 U.S.C. 1322. Vessel operators must lock all marine sanitation devices in a manner that prevents discharge or deposit of untreated sewage;

(iii) Clean vessel deck wash down, clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, or anchor wash;

(iv) For a vessel less than 300 GRT or a vessel 300 GRT or greater without sufficient holding capacity to hold the graywater while within the Sanctuary, clean graywater as defined by section 312 of the FWPCA; or

(v) Vessel engine or generator exhaust.

(3) Discharging or depositing from within or into the Sanctuary any material or other matter from a cruise ship except clean vessel engine cooling water, clean vessel generator cooling

water, vessel engine or generator exhaust, clean bilge water, or anchor wash.

(4) Discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource or quality, except for the exclusions listed in paragraphs (a)(2)(i) through (v) and (a)(3) of this section.

(5) Constructing any structure other than a navigation aid on or in the submerged lands of the Sanctuary; placing or abandoning any structure on or in the submerged lands of the Sanctuary; or drilling into, dredging, or otherwise altering the submerged lands of the Sanctuary in any way, except:

(i) By anchoring vessels (in a manner not otherwise prohibited by this part (see § 922.82(a)(16)));

(ii) While conducting lawful fishing activities;

(iii) Routine maintenance and construction of docks and piers on Tomales Bay; or

(iv) Mariculture activities conducted pursuant to a valid lease, permit, license or other authorization issued by the State of California.

(6) Operating motorized personal watercraft (MPWC), except for:

(i) Emergency search and rescue missions or law enforcement operations (other than routine training activities) carried out by the National Park Service, U.S. Coast Guard, Fire or Police Departments or other Federal, State or local jurisdictions; or

(ii) An MPWC equipped with an operable Global Positional System (GPS) unit in working condition within the four designated zones within the Sanctuary described in Appendix C to this subpart.

(7) Taking any marine mammal, sea turtle, or bird within or above the Sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 *et seq.*, Endangered Species Act (ESA), as amended, 16 U.S.C. 1531 *et seq.*, Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 *et seq.*, or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

(8) Possessing within the Sanctuary (regardless of where taken, moved or removed from), any marine mammal, sea turtle, or bird taken, except as authorized by the MMPA, ESA, MBTA, by any regulation, as amended, promulgated under the MMPA, ESA, or MBTA, or as necessary for valid law enforcement purposes.

(9) Possessing, moving, removing, or injuring, or attempting to possess, move,

remove or injure, a Sanctuary historical resource.

(10) Introducing or otherwise releasing from within or into the Sanctuary an introduced species, except:

(i) Striped bass (*Morone saxatilis*) released during catch and release fishing activity; or

(ii) Species cultivated by mariculture activities in Tomales Bay pursuant to a valid lease, permit, license or other authorization issued by the State of California and in effect on the effective date of the final regulation.

(11) Disturbing marine mammals or seabirds by flying motorized aircraft at less than 1,000 feet over the waters within the seven designated Special Wildlife Protection Zones described in Appendix D to this subpart, except transiting Zone 6 to transport authorized persons or supplies to or from Southeast Farallon Island or for enforcement purposes. Failure to maintain a minimum altitude of 1,000 feet above ground level over such waters is presumed to disturb marine mammals or seabirds.

(12) Operating any vessel engaged in the trade of carrying cargo within an area extending 1 nautical mile from a designated Special Wildlife Protection Zone described in Appendix D to this subpart. This includes but is not limited to tankers and other bulk carriers and barges, or any vessel engaged in the trade of servicing offshore installations, except to transport persons or supplies to or from the Islands or mainland areas adjacent to Sanctuary waters. In no event shall this section be construed to limit access for fishing, recreational or research vessels.

(13) Attracting a white shark anywhere in the Sanctuary; or approaching within 50 meters of any white shark within the line approximating 1 nautical mile around Special Wildlife Protection Zone 6 and 7 described in Appendix D.

(14) Deserting a vessel aground, at anchor, or adrift in the Sanctuary.

(15) Leaving harmful matter aboard a grounded or deserted vessel in the Sanctuary.

(16) Anchoring a vessel in a designated seagrass protection zone in Tomales Bay, except as necessary for mariculture operations conducted pursuant to a valid lease, permit or license. The coordinates for the no-anchoring seagrass protection zones are listed in Appendix B to this subpart.

(17) Interfering with, obstructing, delaying, or preventing an investigation, search, seizure, or disposition of seized property in connection with

enforcement of the Act or any regulation or permit issued under the Act.

(b) All activities currently carried out by the Department of Defense within the Sanctuary are essential for the national defense and, therefore, not subject to the prohibitions in this section. The exemption of additional activities shall be determined in consultation between the Director and the Department of Defense.

(c) The prohibitions in paragraph (a) of this section do not apply to activities necessary to respond to an emergency threatening life, property, or the environment.

(d) The prohibitions in paragraphs (a)(2) through (9) and (a)(11) through (16) of this section do not apply to any activity executed in accordance with the scope, purpose, terms, and conditions of a National Marine Sanctuary permit issued pursuant to 15 CFR 922.48 and 922.83 or a Special Use permit issued pursuant to section 310 of the Act.

(e) The prohibitions in paragraphs (a)(2) through (9) and (10), for the introduction of a introduced species from shellfish mariculture in state waters determined to be non-invasive, of this section do not apply to any activity authorized by any lease, permit, license, approval, or other authorization issued after the effective date of Sanctuary designation or expansion and issued by any Federal, State, or local authority of competent jurisdiction, provided that the applicant complies with 15 CFR 922.49, the Director notifies the applicant and authorizing agency that he or she does not object to issuance of the authorization, and the applicant complies with any terms and conditions the Director deems necessary to protect Sanctuary resources and qualities. Amendments, renewals, and extensions of authorizations in existence on the effective date of designation or expansion constitute authorizations issued after the effective date of Sanctuary designation or expansion.

§ 922.83 Permit procedures and issuance criteria.

(a) A person may conduct an activity prohibited by § 922.82(a)(2) through (9) and (a)(11) through (16) if such activity is specifically authorized by, and conducted in accordance with the scope, purpose, terms and conditions of, a permit issued under § 922.48 and this section.

(b) The Director, at his or her discretion, may issue a National Marine Sanctuary permit under this section, subject to terms and conditions as he or she deems appropriate, if the Director finds that the activity will:

(1) Further research or monitoring related to Sanctuary resources and qualities;

(2) Further the educational value of the Sanctuary;

(3) Further salvage or recovery operations; or

(4) Assist in managing the Sanctuary.

(c) In deciding whether to issue a permit, the Director shall consider factors such as:

(1) The applicant is qualified to conduct and complete the proposed activity;

(2) The applicant has adequate financial resources available to conduct and complete the proposed activity;

(3) The methods and procedures proposed by the applicant are appropriate to achieve the goals of the proposed activity, especially in relation to the potential effects of the proposed activity on Sanctuary resources and qualities;

(4) The proposed activity will be conducted in a manner compatible with the primary objective of protection of Sanctuary resources and qualities, considering the extent to which the conduct of the activity may diminish or enhance Sanctuary resources and qualities, any potential indirect, secondary or cumulative effects of the activity, and the duration of such effects;

(5) The proposed activity will be conducted in a manner compatible with the value of the Sanctuary, considering the extent to which the conduct of the activity may result in conflicts between different users of the Sanctuary, and the duration of such effects;

(6) It is necessary to conduct the proposed activity within the Sanctuary;

(7) The reasonably expected end value of the proposed activity to the furtherance of Sanctuary goals and purposes outweighs any potential adverse effects on Sanctuary resources and qualities from the conduct of the activity; and

(8) Any other factors as the Director deems appropriate.

(d) *Applications.* (1) Applications for permits should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Superintendent, Gulf of the Farallones National Marine Sanctuary, 991 Marine Dr., The Presidio, San Francisco, CA 94129.

(2) In addition to the information listed in § 922.48(b), all applications must include information to be considered by the Director in paragraph (b) and (c) of this section.

(e) The permittee must agree to hold the United States harmless against any claims arising out of the conduct of the permitted activities.

§ 922.84 Certification of other permits.

A permit, license, or other authorization allowing activities prohibited by sanctuary regulations, occurring prior to the effective date of sanctuary expansion and within the sanctuary expansion area, must be certified by the Director as consistent with the purpose of the Sanctuary and having no significant effect on Sanctuary resources. Such certification may impose terms and conditions as deemed appropriate to ensure consistency. In considering whether to make the certifications called for in this section, the Director may seek and consider the views of any other person or entity, within or outside the Federal government, and may hold a public hearing as deemed appropriate. Any request for certification called for in this section must be received by the Director within 60 days of the effective date of sanctuary expansion. The Director may amend, suspend, or revoke any certification made under this section whenever continued operation would violate any terms or conditions of the certification. Any such action shall be forwarded in writing to both the holder of the certified permit, license, or other authorization and the issuing agency and shall set forth reason(s) for the action taken.

Appendix A to Subpart H of Part 922—Gulf of the Farallones National Marine Sanctuary Boundary Coordinates

Coordinates listed in this Appendix are unprojected (Geographic) and based on the North American Datum of 1983.

Point ID No.	Latitude	Longitude
1	39.00000	– 124.33350
2	38.29989	– 123.99988
3	38.29989	– 123.20005
4	38.26390	– 123.18138
5	38.21001	– 123.11913
6	38.16576	– 123.09207
7	38.14072	– 123.08237
8	38.12829	– 123.08742
9	38.10215	– 123.09804
10	38.09069	– 123.10387
11	38.07898	– 123.10924
12	38.06505	– 123.11711
13	38.05202	– 123.12827
14	37.99227	– 123.14137
15	37.98947	– 123.23615
16	37.95880	– 123.32312
17	37.90464	– 123.38958
18	37.83480	– 123.42579
19	37.76687	– 123.42694
20	37.75932	– 123.42686
21	37.68892	– 123.39274
22	37.63356	– 123.32819
23	37.60123	– 123.24292
24	37.59165	– 123.22641
25	37.56305	– 123.19859
26	37.52001	– 123.12879
27	37.50819	– 123.09617

Point ID No.	Latitude	Longitude
28	37.49418	– 123.00770
29	37.50948	– 122.90614
30	37.52988	– 122.85988
31	37.57147	– 122.80399
32	37.61622	– 122.76937
33	37.66641	– 122.75105
34	37.88225	– 122.62753
35	38.35055	– 123.06659
36	38.35559	– 123.06663
37	38.44575	– 123.12602
38	38.45531	– 123.13469
39	38.76231	– 123.52957
40	38.76899	– 123.53398
41	38.91172	– 123.71152
42	38.91632	– 123.71152
43	38.95404	– 123.73405
44	38.96149	– 123.71914
45	39.00000	– 123.69710
46	39.00000	– 124.33350

Appendix B to Subpart H of Part 922— No-Anchoring Seagrass Protection Zones in Tomales Bay

Coordinates listed in this appendix are unprojected (Geographic) and based on the North American Datum of 1983.

ZONE 1: Zone 1 is an area of approximately .11 square nautical miles (.15 square miles) offshore south of Millerton Point. The eastern boundary is a straight line arc that connects points 1 and 2 listed in the coordinate table below. The southern boundary is a straight line arc that connects points 2 and 3, the western boundary is a straight line arc that connects points 3 and 4 and the northern boundary is a straight line arc that connects point 4 to point 5. All coordinates are in the Geographic Coordinate System relative to the North American Datum of 1983.

Zone 1 Point ID	Latitude	Longitude
1	38.10571	– 122.84565
2	38.09888	– 122.83603
3	38.09878	– 122.84431
4	38.10514	– 122.84904
5	38.10571	– 122.84565

ZONE 2: Zone 2 is an area of approximately .15 square nautical miles (.19 square miles) that begins just south of Marconi and extends approximately 1.6 nautical miles (1.9 miles) south along the eastern shore of Tomales Bay. The western boundary is a series of straight line arcs that connect point 1 to point 5 listed in the coordinate table below. The southern boundary is a straight line arc that extends from point 5 towards point 6 until it intersects the Mean High Water Line. From this intersection the eastern boundary follows the Mean High Water Line north until it intersects the straight line arc that connects point 7 to point 8. From this intersection the northern boundary extends to point 8. All coordinates are in the Geographic Coordinate System relative to the North American Datum of 1983.

Zone 2 Point ID	Latitude	Longitude
1	38.13326	– 122.87178
2	38.12724	– 122.86488
3	38.12563	– 122.86480
4	38.11899	– 122.86731
5	38.11386	– 122.85851
6	38.11608	– 122.85813
7	38.14078	– 122.87433
8	38.13326	– 122.87178

ZONE 3: Zone 3 is an area of approximately .01 square nautical miles (.02 square miles) that begins just south of Marshall and extends approximately .5 nautical miles (.6 miles) south along the eastern shore of Tomales Bay. The western boundary is a straight line arc that connects point 1 to point 2 listed in the coordinate table below. The southern boundary is a straight line arc that extends from point 2 towards point 3 until it intersects the Mean High Water Line. From this intersection the eastern boundary follows the Mean High Water Line northward until it intersects the straight line arc that connects point 4 to point 5. From this intersection the northern boundary extends westward along the straight line arc that connects point 4 to point 5. All coordinates are in the Geographic Coordinate System relative to the North American Datum of 1983.

Zone 3 Point ID	Latitude	Longitude
1	38.15956	– 122.89573
2	38.15250	– 122.89042
3	38.15292	– 122.88984
4	38.16038	– 122.89566
5	38.15956	– 122.89573

ZONE 4: Zone 4 is an area of approximately .18 square nautical miles (.21 square miles) that begins just north of Nicks Cove and extends approximately 2.7 nautical miles (3.1 miles) south along the eastern shore of Tomales Bay to just south of Cypress Grove. The western boundary is a series of straight line arcs that connect point 1 to point 8 listed in the coordinate table below. The southern boundary is a straight line arc that extends from point 8 towards point 9 until it intersects the Mean High Water Line. From this intersection the eastern boundary follows the Mean High Water Line north until it intersects the straight line arc that connects point-10 to point 11. From this intersection the northern boundary extends westward along the straight line arc that connects point 10 to point 11. All coordinates are in the Geographic Coordinate System relative to the North American Datum of 1983.

Zone 4 Point ID	Latitude	Longitude
1	38.20004	– 122.92315
2	38.18881	– 122.91740
3	38.18651	– 122.91404
4	38.17919	– 122.91021
5	38.17450	– 122.90545
6	38.16869	– 122.90475
7	38.16535	– 122.90308

Zone 4 Point ID	Latitude	Longitude
8	38.16227	– 122.89650
9	38.16266	– 122.89620
10	38.20080	– 122.92174
11	38.20004	– 122.92315

ZONE 5: Zone 5 is an area of approximately 1.3 square nautical miles (1.6 square miles) that begins east of Lawsons Landing and extends approximately 2.7 nautical miles (3.1 miles) east and south along the eastern shore of Tomales Bay but excludes areas adjacent (approximately .32 nautical miles or .37 miles) to the mouth of Walker Creek. The eastern boundary is a series of straight line arcs that connect point 1 to point 3 listed in the coordinate table below. From point 3 the southern boundary trends eastward along the straight line arc that connects point 3 to point 4 until it intersects the Mean High Water Line. From this intersection the boundary follows the Mean High Water Line northward until it intersects the straight line arc that connects point 5 to point 6. From this intersection the boundary extends westward along the straight line arc that connects point 5 to point 6. From point 6 the boundary follows the straight line arc that connects point 6 to point 7, and then extends along the straight line arc that connects point 7 to point 8 until it again intersects the Mean High Water Line. From this intersection the boundary follows the Mean High Water Line until it intersects the straight line arc that connects point 9 to point 10. From this intersection the boundary extends to point 10 along the straight line arc that connects point 9 to point 10. All coordinates are in the Geographic Coordinate System relative to the North American Datum of 1983.

Zone 5 Point ID	Latitude	Longitude
1	38.21825	– 122.96041
2	38.20666	– 122.94397
3	38.19431	– 122.93431
4	38.20080	– 122.92174
5	38.20522	– 122.92446
6	38.20366	– 122.93246
7	38.20938	– 122.94153
8	38.21106	– 122.93742
9	38.23129	– 122.96293
10	38.21825	– 122.96041

ZONE 6: Zone 6 is an area of approximately .01 square nautical miles (.02 square miles) in the vicinity of Indian Beach along the western shore of Tomales Bay. The eastern boundary is a straight line arc that connects point 1 to point 2 listed in the coordinate table below. The southern boundary extends westward along the straight line arc that connects point 2 to point 3 until it intersects the Mean High Water Line. From this intersection the eastern boundary follows the Mean High Water Line northward until it intersects the straight line arc that connects point 3 to point 4. From this intersection the northern boundary extends eastward along the straight line arc that connects point 4 to point 5. All coordinates are in the Geographic Coordinate

System relative to the North American Datum of 1983.

Zone 6 Point ID	Latitude	Longitude
1	38.14103	– 122.89537
2	38.13919	– 122.89391
3	38.13804	– 122.89610
4	38.14033	– 122.89683
5	38.14103	– 122.89537

Zone 7: Zone 7 is an area of approximately .09 square nautical miles (.12 square miles) that begins just south of Pebble Beach and extends approximately 1.6 nautical miles (1.9 miles) south along the western shore of Tomales Bay. The eastern boundary is a series of straight line arcs that connect point 1 to point 5 listed in the coordinate table below. The southern boundary extends along the straight line arc that connects point 5 to point 6 until it intersects the Mean High Water Line. From this intersection the western boundary extends north along the Mean High Water Line until it intersects the straight line arc that connects point 7 to point 8. From this intersection the northern boundary extends eastward along the straight line arc that connects point 7 to point 8. All coordinates are in the Geographic Coordinate System relative to the North American Datum of 1983.

Zone 7 Point ID	Latitude	Longitude
1	38.13067	– 122.88620
2	38.12362	– 122.87984
3	38.11916	– 122.87491
4	38.11486	– 122.86896
5	38.11096	– 122.86468
6	38.11027	– 122.86551
7	38.13001	– 122.88749
8	38.13067	– 122.88620

Appendix C to Subpart H of Part 922— Motorized Personal Watercraft Zones and Access Routes Within the Sanctuary

Coordinates listed in this appendix are unprojected (Geographic) and based on the North American Datum of 1983.

The four zones and access routes are:

(1) Motorized Personal Watercraft Zone 1 (MPWCZ 1) encompasses an area of approximately 6.4 square nautical miles (8.5 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of MPWCZ 1 extends due south along a meridian from Point 1, west of Manchester Beach in Mendocino County, to Point 2, which is west of Arena Cove. The boundary then follows a rhumb line east from Point 2 towards Point 3 until it intersects the Mean High Water Line at the south end of Arena Cove. From this intersection, the boundary follows the Mean High Water Line until it intersects the straight line arc that connects Point 4 and Point 5. The boundary extends across Arena Cove along this arc until it intersects the Mean High Water Line on the north side of Arena Cove. The boundary then follows the Mean High Water Line until it

intersects the rhumb line that connects Point 6 and Point 7. From this intersection, the boundary extends due west to Point 7. From Point 7 the boundary extends due north along the meridian that connects Point 7 and Point 8 until it intersects the Mean High Water Line on the north side of Point Arena. From this intersection the boundary again follows the Mean High Water Line until it intersects the rhumb line connecting Point 9 and Point 10. The boundary then turns seaward and extends due west to Point 10.

Zone 1 is bounded by:

Zone 1 Point ID No.	Latitude	Longitude
1	39.00000	– 123.75000
2	38.91024	– 123.75000
3	38.91024	– 123.71146
4	38.91172	– 123.71152
5	38.91632	– 123.71152
6	38.91790	– 123.72626
7	38.91790	– 123.74166
8	38.95554	– 123.74166
9	39.00000	– 123.69450
10	39.00000	– 123.75000

(2) Motorized Personal Watercraft Zone 2 (MPWCZ 2) encompasses an area of approximately 19.8 square nautical miles (26.2 square miles). The precise boundary coordinates are listed in the table following this description. The southern boundary of MPWCZ 2 extends due east along a rhumb line that connects Point 1, south of Arena Cove, to Point 2, just offshore of Haven's Neck in Mendocino County. From Point 2 the boundary trends north and west, generally parallel to the shoreline, and extends, in sequence, to Point 3 off Iversen Point, then to Point 4 off Saunders Landing, and then to Point 5 off Moat. From Point 5 the boundary follows the straight line arc that connects Point 5 and Point 6 until it intersects the Mean High Water Line at the south end of Arena Cove. From this intersection, the boundary follows the Mean High Water Line until it intersects the straight line arc that connects Point 7 and Point 8. The boundary extends across Arena Cove towards Point 8 until it intersects the Mean High Water Line on the north side of Arena Cove. The boundary then follows the Mean High Water Line until it intersects the meridian that connects Point 9 and Point 10. The boundary then extends due south to Point 10.

Zone 2 is bounded by:

Zone 2 Point ID No.	Latitude	Longitude
1	38.80856	– 123.72378
2	38.80856	– 123.60351
3	38.84514	– 123.64738
4	38.85202	– 123.65113
5	38.88255	– 123.68162
6	38.91033	– 123.71114
7	38.91172	– 123.71152
8	38.91632	– 123.71152
9	38.91790	– 123.72626

(3) Motorized Personal Watercraft Zone 3 (MPWCZ 3) encompasses an area of

approximately 2.9 square nautical miles (3.8 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of MPWCZ 3 extends due south along a meridian from Point 1, west of Timber Cove in Sonoma County, to Point 2, which is west of Fort Ross Reef. The boundary then turns east and follows a rhumb line from Point 2 to Point 3. From Point 3 the boundary turns due north and follows the meridian from Point 3 towards Point 4 until it intersects the Mean High Water Line at the south end of Timber Cove. From the south end of Timber Cove the boundary follows the Mean High Water Line until it intersects the rhumb line that connects Point 5 and Point 6. From this intersection the boundary extends due west to Point 6.

Zone 3 is bounded by:

Zone 3 Point ID No.	Latitude	Longitude
1	38.53150	– 123.30000
2	38.50000	– 123.30000
3	38.50000	– 123.26896
4	38.52519	– 123.26896
5	38.53150	– 123.27853
6	38.53150	– 123.30000

(4) Motorized Personal Watercraft Zone 4 (MPWCZ 4) encompasses an area of approximately 4.6 square nautical miles (6.1 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of MPWCZ 4 extends due south from Point 1, off Coleman Beach in Sonoma County, to Point 2, which is east of Bodega Head. From Point 2 the boundary extends due east along a rhumb line to Point 3. The boundary continues from Point 3 though Point 10 inclusive, in numerical sequence, to form an access route that connects to the entrance to Bodega Harbor. From Point 10 the boundary extends due north along the meridian that connects Point 10 and Point 11. At Point 11 the boundary turns west and follows a rhumb line to Point 12. At Point 12 the boundary turns due north and follows the meridian from Point 12 to Point 13. From Point 13 the boundary extends due east along a rhumb line that connects Point 13 and Point 14, until it intersects the Mean High Water Line at South Salmon Creek Beach. At this intersection the boundary turns northward and follows the Mean High Water Line until it intersects the rhumb line that connects Point 15 and Point 16. From this intersection the boundary extends due west to Point 16.

Zone 4 is bounded by:

Zone 4 Point ID No.	Latitude	Longitude
1	38.36615	– 123.10000
2	38.29800	– 123.10000
3	38.29800	– 123.07374
4	38.27972	– 123.07374
5	38.28542	– 123.03204
6	38.30574	– 123.04784
7	38.30574	– 123.04987
8	38.28619	– 123.03437
9	38.28142	– 123.07182

Zone 4 Point ID No.	Latitude	Longitude
10	38.29800	– 123.07182
11	38.31278	– 123.07182
12	38.31278	– 123.07824
13	38.33200	– 123.07824
14	38.33200	– 123.06928
15	38.36615	– 123.07186
16	38.36615	– 123.10000

Appendix D to Subpart H of Part 922— Special Wildlife Protection Zones Within the Sanctuary

Coordinates listed in this appendix are unprojected (Geographic) and based on the North American Datum of 1983.

(1) Special Wildlife Protection Zone 1 (SWPZ 1) encompasses an area of approximately 7.9 square nautical miles (10.5 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 1 extends south from Point 1, west of Haven's Neck in Mendocino County, to Point 2, west of Del Mar Point. The boundary then extends east from Point 2 along a rhumb line connecting Point 2 and Point 3 until it intersects the Mean High Water Line at Del Mar Point. The SWPZ 1 boundary then turns north to follow the Mean High Water Line towards Haven's Neck and continues until it intersects a rhumb line connecting Point 4 and Point 5. From this intersection the Sanctuary boundary continues west along its northernmost extent to Point 5.

Zone 1 Point ID No.	Latitude	Longitude
1	38.80865	– 123.63227
2	38.74096	– 123.54306
3	38.74096	– 123.51051
4	38.80865	– 123.60195
5	38.80865	– 123.63227

(2) Special Wildlife Protection Zone 2 (SWPZ 2) encompasses an area of approximately 16.2 square nautical miles (21.4 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 2 extends south and east from Point 1, south of Windermere Point in Sonoma County, to Point 2 and then to Point 3 in sequence. Point 3 is west of Duncans Point in Sonoma County. The boundary then extends east from Point 3 along a rhumb line connecting Point 3 and Point 4 until it intersects the Mean High Water Line at Duncans Point. The boundary then turns north to follow the Mean High Water Line towards Windermere Point until it intersects a meridian connecting Point 5 and Point 6. From this intersection the boundary continues due south along a meridian to Point 6.

Zone 2 Point ID No.	Latitude	Longitude
1	38.49854	– 123.26804

Zone 2 Point ID No.	Latitude	Longitude
2	38.45095	– 123.18564
3	38.39311	– 123.12068
4	38.39311	– 123.09527
5	38.52487	– 123.26804
6	38.49854	– 123.26804

(3) Special Wildlife Protection Zone 3 (SWPZ 3) encompasses an area of approximately 7 square nautical miles (9.3 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 3 extends south and east from Point 1, southwest of the Estero de San Antonio in Sonoma County, to Point 2, south of Tomales Point in Marin County. The boundary then extends north and east from Point 2 along a straight line arc connecting Point 2 and Point 3 until it intersects the boundary of the Point Reyes National Seashore. From this intersection the boundary follows the Point Reyes National Seashore boundary around Tomales Point into Tomales Bay and continues until it again intersects the straight line arc that connects Point 2 and Point 3. From this intersection the boundary follows the straight line arc north and east until it intersects the Mean High Water Line at Toms Point in Tomales Bay. The SWPZ 3 boundary then follows the Mean High Water Line northward towards the Estero de San Antonio until it intersects the straight line arc that connects Point 4 and Point 5. From this intersection the Sanctuary boundary continues south and west to Point 5.

Zone 3 Point ID No.	Latitude	Longitude
1	38.24001	– 123.02963
2	38.19249	– 122.99523
3	38.21544	– 122.95286
4	38.27011	– 122.97840
5	38.24001	– 123.02963

(4) Special Wildlife Protection Zone 4 (SWPZ 4) encompasses an area of approximately 10.2 square nautical miles (13.5 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 4 extends south and west from Point 1, west of Point Reyes in Marin County, to Point 2, south and west of Point Reyes Lighthouse. The boundary then follows a straight line arc east and south from Point 2 to Point 3. From Point 3 the boundary follows a straight line arc north to Point 4. From Point 4 the SWPZ 4 boundary proceeds west along the straight line arc that connects Point 4 and Point 5 until it intersects the Point Reyes National Seashore boundary north of Chimney Rock. The boundary then follows the Point Reyes National Seashore boundary around Point Reyes until it intersects the straight line arc that connects Point 4 and Point 5 north of the Point Reyes Lighthouse. From this intersection the boundary turns seaward and continues west to Point 5.

Zone 4 Point ID No.	Latitude	Longitude
1	38.01475	– 123.05013
2	37.97536	– 123.05482
3	37.96521	– 122.93771
4	38.00555	– 122.93504
5	38.01475	– 123.05013

(5) Special Wildlife Protection Zone 5 (SWPZ 5) encompasses an area of approximately 14.8 square nautical miles (19.6 square miles). The precise boundary coordinates are listed in the table following this description. The western boundary of SWPZ 5 extends south and east from Point 1, near Millers Point in Marin County, to Point 2, which is south and west of Bolinas Point. The boundary then follows a rhumb line east from Point 2 towards Point 3 until it intersects the Mean High Water Line at Rocky Point. From this intersection, the boundary follows the Mean High Water Line north to Bolinas Point and Millers Point, respectively, including Bolinas Lagoon but not including Seadrift Lagoon, until it intersects the straight line arc that connects Point 4 and Point 5. From this intersection the boundary turns seaward and continues to west and south along the straight line arc to Point 5.

Zone 5 Point ID No.	Latitude	Longitude
1	37.96579	– 122.83284
2	37.88195	– 122.73989
3	37.88195	– 122.62873
4	37.98554	– 122.81172
5	37.96579	– 122.83284

(6) Special Wildlife Protection Zone 6 (SWPZ 6) encompasses an area of approximately 6.8 square nautical miles (9 square miles). The precise boundary coordinates are listed in the table following this description. The boundary of SWPZ 6 extends south and west from Point 1, north of Southeast Farallon Island, along a straight line arc to Point 2, then south and east along a straight line arc to Point 3, then north and east along a straight line arc to Point 4, then north and west along a straight line arc to Point 5.

Zone 6 Point ID No.	Latitude	Longitude
1	37.72976	– 123.00961
2	37.69697	– 123.04374
3	37.66944	– 123.00176
4	37.70246	– 122.96608
5	37.72976	– 123.00961

(7) Special Wildlife Protection Zone 7 (SWPZ 7) encompasses an area of approximately 6 square nautical miles (7.9 square miles). The precise boundary coordinates are listed in the table following this description. The boundary of SWPZ 7 extends south and west from Point 1, north of North Farallon Island, along a straight line arc to Point 2, then south and east along a

straight line arc to Point 3, then north and east along a straight line arc to Point 4, then north and west along a straight line arc to Point 5.

Zone 7 Point ID No.	Latitude	Longitude
1	37.79568	– 123.10845
2	37.76746	– 123.13285
3	37.73947	– 123.09341
4	37.76687	– 123.06330
5	37.79568	– 123.10845

■ 4. Revise part 922 Subpart K to read as follows:

Subpart K—Cordell Bank National Marine Sanctuary

§ 922.110 Boundary.

The Cordell Bank National Marine Sanctuary (Sanctuary) boundary encompasses a total area of approximately 971 square nautical miles (1,286 square miles) of offshore ocean waters, and submerged lands thereunder, surrounding the submarine plateau known as Cordell Bank along—the northern coast of California, approximately 45 nautical miles west-northwest of San Francisco, California. The precise boundary coordinates are listed in Appendix A to this subpart. The northern boundary of the Sanctuary is a rhumb line that begins approximately 6 nautical miles (8 miles) west of Bodega Head in Sonoma County, California at Point 1 and extends west approximately 38 nautical miles (44 miles) to Point 2. This line is part of a shared boundary between the Sanctuary and Gulf of the Farallones National Marine Sanctuary (GFNMS). The western boundary of the Sanctuary extends south from Point 2 approximately 34 nautical miles (39 miles) to Point 3. From Point 3 the Sanctuary boundary continues east 15 nautical miles (17 miles) to Point 4 where it intersects the GFNMS boundary again. The line from Point 3 to Point 4 forms the southernmost boundary of the Sanctuary. The eastern boundary of the Sanctuary is a series of straight lines connecting Points 4 through 20 in numerical sequence. The Sanctuary is coterminous with GFNMS along both its (the Sanctuary's) eastern and northern boundaries.

§ 922.111 Definitions.

In addition to the definitions found in § 922.3, the following definitions apply to this subpart:

Clean means not containing detectable levels of harmful matter.

Cruise ship means a vessel with 250 or more passenger berths for hire.

Harmful matter means any substance, or combination of substances, that because of its quantity, concentration, or physical, chemical, or infectious characteristics may pose a present or potential threat to Sanctuary resources or qualities, including but not limited to: fishing nets, fishing line, hooks, fuel, oil, and those contaminants (regardless of quantity) listed pursuant to 42 U.S.C.

Introduced species means any species (including, but not limited to, any of its biological matter capable of propagation) that is non-native to the ecosystems of the Sanctuary; or any organism into which altered genetic matter, or genetic matter from another species, has been transferred in order that the host organism acquires the genetic traits of the transferred genes.

§ 922.112 Prohibited or otherwise regulated activities.

(a) The following activities are prohibited and thus are unlawful for any person to conduct or to cause to be conducted within the Sanctuary:

(1) Exploring for, developing, or producing oil, gas, or minerals.

(2)(i) Discharging or depositing from within or into the Sanctuary, other than from a cruise ship, any material or other matter except:

(A) Fish, fish parts, chumming materials, or bait used in or resulting from lawful fishing activities within the Sanctuary, provided that such discharge or deposit is during the conduct of lawful fishing activity within the Sanctuary;

(B) For a vessel less than 300 gross registered tons (GRT), or a vessel 300 GRT or greater without sufficient holding tank capacity to hold sewage while within the Sanctuary, clean effluent generated incidental to vessel use and generated by an operable Type I or II marine sanitation device (U.S. Coast Guard classification) approved in accordance with section 312 of the Federal Water Pollution Control Act, as amended, (FWPCA), 33 U.S.C. 1322. Vessel operators must lock all marine sanitation devices in a manner that prevents discharge or deposit of untreated sewage;

(C) Clean vessel deck wash down, clean vessel engine cooling water, clean vessel generator cooling water, clean bilge water, or anchor wash;

(D) For a vessel less than 300 GRT or a vessel 300 GRT or greater without sufficient holding capacity to hold graywater while within the Sanctuary, clean graywater as defined by section 312 of the FWPCA; or

(E) Vessel engine or generator exhaust.

(ii) Discharging or depositing from within or into the Sanctuary any material or other matter from a cruise ship except clean vessel engine cooling water, clean vessel generator cooling water, vessel engine or generator exhaust, clean bilge water, or anchor wash.

(iii) Discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource or quality, except as listed in paragraphs (a)(2)(i) and (a)(2)(ii) of this section.

(3) On or within the line representing the 50-fathom isobath surrounding Cordell Bank, removing, taking, or injuring or attempting to remove, take, or injure benthic invertebrates or algae located on Cordell Bank. This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States). The coordinates for the line representing the 50-fathom isobath are listed in appendix B to this subpart. There is a rebuttable presumption that any such resource found in the possession of a person within the Sanctuary was taken or removed by that person.

(4)(i) On or within the line representing the 50-fathom isobath surrounding Cordell Bank, drilling into, dredging, or otherwise altering the submerged lands; or constructing, placing, or abandoning any structure, material or other matter on or in the submerged lands. This prohibition does not apply to use of bottom contact gear used during fishing activities, which is prohibited pursuant to 50 CFR part 660 (Fisheries off West Coast States). The coordinates for the line representing the 50-fathom isobath are listed in appendix B to this subpart.

(ii) In the Sanctuary beyond the line representing the 50-fathom isobath surrounding Cordell Bank, drilling into, dredging, or otherwise altering the submerged lands; or constructing, placing, or abandoning any structure, material or matter on the submerged lands except as incidental and necessary for anchoring any vessel or lawful use of any fishing gear during normal fishing activities. The coordinates for the line representing the 50-fathom isobath are listed in appendix B to this subpart.

(5) Taking any marine mammal, sea turtle, or bird within or above the Sanctuary, except as authorized by the Marine Mammal Protection Act, as amended, (MMPA), 16 U.S.C. 1361 *et seq.*, Endangered Species Act, as amended, (ESA), 16 U.S.C. 1531 *et seq.*,

Migratory Bird Treaty Act, as amended, (MBTA), 16 U.S.C. 703 *et seq.*, or any regulation, as amended, promulgated under the MMPA, ESA, or MBTA.

(6) Possessing within the Sanctuary (regardless of where taken, moved or removed from), any marine mammal, sea turtle or bird taken, except as authorized by the MMPA, ESA, MBTA, by any regulation, as amended, promulgated under the MMPA, ESA, or MBTA, or as necessary for valid law enforcement purposes.

(7) Possessing, moving, removing, or injuring, or attempting to possess, move, remove or injure, a Sanctuary historical resource.

(8) Introducing or otherwise releasing from within or into the Sanctuary an introduced species, except striped bass (*Morone saxatilis*) released during catch and release fishing activity.

(9) Interfering with, obstructing, delaying, or preventing an investigation, search, seizure, or disposition of seized property in connection with enforcement of the Act or any regulation or permit issued under the Act.

(b) The prohibitions in paragraph (a) of this section do not apply to activities necessary to respond to an emergency threatening life, property or the environment.

(c) All activities being carried out by the Department of Defense (DOD) within the Sanctuary on the effective date of designation or expansion of the Sanctuary that are necessary for national defense are exempt from the prohibitions contained in the regulations in this subpart. Additional DOD activities initiated after the effective date of designation or expansion that are necessary for national defense will be exempted by the Director after consultation between the Department of Commerce and DOD. DOD activities not necessary for national defense, such as routine exercises and vessel operations, are subject to all prohibitions contained in the regulations in this subpart.

(d) The prohibitions in paragraphs (a)(2), (a)(3), and (a)(4)(ii) through (a)(7) of this section do not apply to any activity authorized by any lease, permit, license, approval, or other authorization issued after the effective date of Sanctuary designation or expansion and issued by any Federal, State, or local authority of competent jurisdiction, provided that the applicant complies with 15 CFR 922.49, the Director notifies the applicant and authorizing agency that he or she does not object to issuance of the authorization, and the applicant complies with any terms and conditions the Director deems necessary to protect Sanctuary resources and

qualities. Amendments, renewals, and extensions of authorizations in existence on the effective date of designation or expansion constitute authorizations issued after the effective date of Sanctuary designation or expansion.

(e) The prohibitions in paragraphs (a)(2) through (7) of this section do not apply to any activity executed in accordance with the scope, purpose, terms, and conditions of a National Marine Sanctuary permit issued pursuant to 15 CFR 922.48 and 922.113 or a Special Use permit issued pursuant to section 310 of the Act.

(f) Where necessary to prevent immediate, serious, and irreversible damage to a Sanctuary resource, any activity may be regulated within the limits of the Act on an emergency basis for no more than 120 days.

§ 922.113 Permit procedures and issuance criteria.

(a) A person may conduct an activity prohibited by § 922.112, (a)(2), through (a)(7), if such activity is specifically authorized by, and conducted in accordance with the scope, purpose, terms and conditions of, a permit issued under § 922.48 and this section.

(b) The Director, at his or her discretion, may issue a national marine sanctuary permit under this section, subject to terms and conditions, as he or she deems appropriate, if the Director finds that the activity will:

(1) Further research or monitoring related to Sanctuary resources and qualities;

(2) Further the educational value of the Sanctuary;

(3) Further salvage or recovery operations in or near the Sanctuary in connection with a recent air or marine casualty; or

(4) Assist in managing the Sanctuary.

(c) In deciding whether to issue a permit, the Director shall consider such factors as:

(1) The applicant is qualified to conduct and complete the proposed activity;

(2) The applicant has adequate financial resources available to conduct and complete the proposed activity;

(3) The methods and procedures proposed by the applicant are appropriate to achieve the goals of the proposed activity, especially in relation to the potential effects of the proposed activity on Sanctuary resources and qualities;

(4) The proposed activity will be conducted in a manner compatible with the primary objective of protection of Sanctuary resources and qualities, considering the extent to which the

conduct of the activity may diminish or enhance Sanctuary resources and qualities, any potential indirect, secondary or cumulative effects of the activity, and the duration of such effects;

(5) The proposed activity will be conducted in a manner compatible with the value of the Sanctuary, considering the extent to which the conduct of the activity may result in conflicts between different users of the Sanctuary, and the duration of such effects;

(6) It is necessary to conduct the proposed activity within the Sanctuary;

(7) The reasonably expected end value of the proposed activity to the furtherance of Sanctuary goals and purposes outweighs any potential adverse effects on Sanctuary resources and qualities from the conduct of the activity; and

(8) The Director may consider additional factors as he or she deems appropriate.

(d) *Applications.* (1) Applications for permits should be addressed to the Director, Office of National Marine Sanctuaries; ATTN: Superintendent, Cordell Bank National Marine Sanctuary, P.O. Box 159, Olema, CA 94950.

(2) In addition to the information listed in § 922.48(b), all applications must include information to be considered by the Director in paragraph (b) and (c) of this section.

(e) The permittee must agree to hold the United States harmless against any claims arising out of the conduct of the permitted activities.

Appendix A to Subpart K of Part 922—Cordell Bank National Marine Sanctuary Boundary Coordinates

Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

SANCTUARY BOUNDARY COORDINATES

Point ID No. sanctuary boundary	Latitude	Longitude
1	38.29989	– 123.20005
2	38.29989	– 123.99988
3	37.76687	– 123.75143
4	37.76687	– 123.42694
5	37.83480	– 123.42579
6	37.90464	– 123.38958
7	37.95880	– 123.32312
8	37.98947	– 123.23615
9	37.99227	– 123.14137
10	38.05202	– 123.12827
11	38.06505	– 123.11711
12	38.07898	– 123.10924
13	38.09069	– 123.10387
14	38.10215	– 123.09804

SANCTUARY BOUNDARY
COORDINATES—Continued

Point ID No. sanctuary boundary	Latitude	Longitude
15	38.12829	– 123.08742
16	38.14072	– 123.08237
17	38.16576	– 123.09207
18	38.21001	– 123.11913
19	38.26390	– 123.18138
20	38.29989	– 123.20005

**Appendix B to Subpart K of Part 922—
Line Representing the 50-Fathom
Isobath Surrounding Cordell Bank**

Coordinates listed in this appendix are unprojected (Geographic Coordinate System) and based on the North American Datum of 1983 (NAD83).

CORDELL BANK FIFTY FATHOM LINE

Point ID No.	Latitude	Longitude
1	37.96034	– 123.40371
2	37.96172	– 123.42081
3	37.9911	– 123.44379
4	38.00406	– 123.46443
5	38.01637	– 123.46076

**CORDELL BANK FIFTY FATHOM LINE—
Continued**

Point ID No.	Latitude	Longitude
6	38.04684	– 123.47920
7	38.07106	– 123.48754
8	38.07588	– 123.47195
9	38.06451	– 123.46146
10	38.07123	– 123.44467
11	38.04446	– 123.40286
12	38.01442	– 123.38588
13	37.98859	– 123.37533
14	37.97071	– 123.38605

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GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY



DRAFT MANAGEMENT PLAN

UPDATED IN RESPONSE TO THE PROPOSED SANCTUARY EXPANSION

UPDATED APRIL 2014

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
OFFICE OF NATIONAL MARINE SANCTUARIES





**GULF OF THE FARALLONES
NATIONAL MARINE SANCTUARY
DRAFT MANAGEMENT PLAN**

Updated April 2014



The Gulf of the Farallones National Marine Sanctuary (GFNMS) Management Plan has been updated in response to the proposed sanctuary expansion. A sanctuary management review is conducted at a sanctuary periodically, in accordance with the National Marine Sanctuaries Act (NMSA; 16 U.S.C. 1431 et seq.). The draft updated plan applies to the entire area encompassed by the existing sanctuary and the proposed expansion area. The issue areas and programs addressed in this document were built with guidance from the general public, sanctuary staff, agency representatives, experts in the field and the sanctuary advisory council.

For readers that would like to learn more about the management plan, GFNMS policies and community-based management processes, we encourage you to visit our website at www.farallones.noaa.gov. Readers who do not have Internet access may call the Sanctuary office at (415) 561-6622 to request relevant documents or further information.

The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) seeks to increase public awareness of America's ocean and Great Lakes treasures by conducting scientific research, monitoring, exploration and educational programs. Today, the program manages thirteen national marine sanctuaries and one marine national monument that together encompass more than 170,000 square miles of America's ocean and Great Lakes natural and cultural resources.

The NOAA Ocean Service is the umbrella organization for ONMS and is dedicated to exploring, understanding, conserving and restoring the nation's coasts and oceans and works to balance environmental protection with economic prosperity in its mission promoting safe navigation, supporting coastal communities, sustaining coastal habitats and mitigating coastal hazards.

NOAA, an agency of the U.S. Department of Commerce, is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and providing environmental stewardship of our nation's coastal and marine resources.

For more information, contact:

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White Shark (*Carcharodon carcharias*) – Scot Anderson

TABLE OF CONTENTS

<i>Gulf of the Farallones National Marine Sanctuary Map</i>	v
<i>Executive Summary</i>	1
<i>Introduction.....</i>	5
<i>Sanctuary Setting</i>	13
<i>Structure of the Action Plans</i>	33
<i>Issue-Based Action Plans</i>	39
Water Quality.....	41
Performance Measures.....	57
Wildlife Disturbance.....	59
Wildlife Protection & MPWC Zone Maps	75
Performance Measures.....	77
Introduced Species.....	79
Performance Measures.....	90
Ecosystem Protection: Impacts from Fishing Activities	93
Performance Measures.....	102
Impacts from Vessel Spills	105
Vessel Traffic Lanes Map.....	117
Performance Measures.....	118
<i>Program Area Action Plans.....</i>	121
Education and Outreach	123
Performance Measures.....	132
Conservation Science.....	135
Performance Measures.....	145
Resource Protection.....	149
Performance Measures.....	165
Administration	167
Staffing Plan.....	177
<i>Cross-Cutting Action Plans</i>	179
Administration and Operations.....	183
Community Outreach.....	189

Table of Contents
GFNMS Draft Management Plan

Ecosystem Monitoring.....	195
Maritime Heritage	203
<i>Appendices</i>.....	213
Appendix A: Jurisdictional Authorities	215
Appendix B: Glossary of Terms	219
Appendix C: Acronyms	223
Appendix D: Citations	229
Appendix E: Vertebrates.....	235
Appendix F: Invertebrates and Algae	247
Appendix G: Introduced Species	261

EXECUTIVE SUMMARY



THE SOUTH FARALLON ISLANDS SERVE AS A CRITICAL BREEDING AND FEEDING GROUND FOR MANY SEABIRD AND MARINE MAMMAL POPULATIONS OF THE SANCTUARY. PHOTO: NOAA

Current Status

This document is the draft update to the Management Plan for Gulf of the Farallones National Marine Sanctuary (GFNMS). The National Oceanic and Atmospheric Administration (NOAA) prepared the plan in cooperation with the public, state and federal agencies, stakeholders, and the Gulf of the Farallones Sanctuary Advisory Council. The last version of the management plan was published in 2008, and has been updated in response to the proposed sanctuary expansion. The plan applies to the entire area encompassed by the existing sanctuary and the proposed expansion area. The entire management plan has not been rewritten; the plan will be reviewed five years after the expansion is effective (if approved).

GFNMS Designation

GFNMS has been vested with the authority, in accordance with the National Marine Sanctuaries Act (NMSA), to provide comprehensive and coordinated conservation and management of the sanctuary. In general, the Sanctuary includes the waters surrounding the Farallon Islands and the coastal waters extending north-to-south from the 39th Parallel at Alder Creek in Mendocino County to Rocky Point in Marin County. From east-to-west the Sanctuary extends from the Mean High Water Line, with notable exceptions, to the continental margin at or about the 10,000 foot depth contour. The Sanctuary is adjacent to Cordell Bank National Marine Sanctuary (CBNMS) on the north and east sides of CBNMS, and adjacent to the Monterey Bay National Marine Sanctuary (MBNMS) along the northern boundary of MBNMS. Shoreward, the sanctuary includes the Estero Americano, Estero de San Antonio, Tomales Bay and Bolinas

Executive Summary

GFNMS Draft Management Plan

Lagoon but does not include the Garcia River Estuary, Point Arena Harbor, Gualala River Estuary, Russian River Estuary, Salmon Creek Estuary or Bodega Harbor.

This area of special national significance was designated a national marine sanctuary because these waters provide important marine and nearshore habitats for a diverse array of marine mammals and marine birds, as well as fishery, plant, algae, and benthic resources. The marine mammals and seabirds present in abundant numbers on the Farallon Islands and the mainland coast depend as much on the integrity and productivity of these adjacent ocean and estuarine waters as on the preservation of the shore areas they use for breeding, feeding, and hauling out.

GFNMS Original Management Plan

Originally designated in 1981 as the Point Reyes-Farallon Islands Marine Sanctuary, sanctuary management responsibilities were delegated to the California Department of Fish and Wildlife (CDFW). Historically, the site focused largely on education and public awareness of biologically, culturally, or historically significant underwater resources.

The original management plan, developed at the time of designation of the sanctuary in 1981, provided guidelines to ensure that all management actions undertaken in the first five years of designation were directed to resolving important issues as a means of meeting sanctuary objectives. Management objectives were considered in three areas: resource protection, interpretation, and research. The management plan also called for promulgation of regulations or prohibitions.

The specific requirements of GFNMS' original management plan were compatible with the overall sanctuary management concepts embodied within the NMSA of 1972 and its implementing regulations (15 CFR Part 922), which require that a management plan be prepared and implemented for each national marine sanctuary.

Management Plan Review

The 1992 amendments to the NMSA required that each of the national marine sanctuaries engage in a management plan review process periodically to reevaluate site-specific goals and objectives, management techniques, and strategies in achieving those goals and objectives. The Office of National Marine Sanctuaries (ONMS) initiated a review of the management plans of Gulf of the Farallones, Cordell Bank, and Monterey Bay national marine sanctuaries jointly. Since these sanctuaries are located adjacent to one another, and share many of the same resources and issues, the staff from each office work closely together on programs. In addition, all three sites share overlapping interest and user groups. It was more cost effective for the ONMS to review the three sites jointly, rather than conduct three independent reviews.

The management plan review process provided GFNMS with the opportunity to: take a closer look at how the marine environment has changed since its designation; understand the cause and effect relationship of human activity and natural perturbations on the marine resources; and engage the public in the management decision-making process. As a result of this process,

which ended in 2008, GFNMS reshaped its management structure, restructured program areas, and evaluated regulations.

With this update, the GFNMS management plan will guide the operation of the expanded sanctuary, if applicable, for the next five to ten years, helping the sanctuary set budget and project priorities each year in preparation of its annual operating plan. Nine action plans are contained in this management plan:

1. Water Quality
2. Wildlife Disturbance
3. Introduced Species
4. Ecosystem Protection: Impacts from Fishing Activities
5. Vessel Spills
6. Education and Outreach
7. Conservation Science
8. Resource Protection
9. Administration

Updates to this Management Plan include: revisions to the description and map of GFNMS; updated maps in the Wildlife Disturbance and Vessel Spills action plans; technical corrections, including removal of obsolete text and completed actions and additions relevant to the expanded sanctuary area; additional activities regarding climate change, white shark stewardship, ship strikes and monitoring of whales, and wildlife protections in the expansion area; key partners summarized at the action plan and cross-cut action plan level rather than at the strategy level; deletion of specific products; revision of former timelines and budgets into a summary implementation table, and updates to the species list appendix. Activities were also added to the Cross-cut Action Plans related to management of the expansion area, which apply to all three sanctuaries.

INTRODUCTION

OVERVIEW

Background

Gulf of the Farallones National Marine Sanctuary (GFNMS) has been vested with the authority, in accordance with the National Marine Sanctuaries Act (NMSA) (1972), to provide comprehensive and coordinated conservation and management of the nearshore and offshore waters within its boundaries. A complete spectrum of marine habitats ranging from unique estuarine, to intertidal, pelagic, and deep oceanic environments is found within the sanctuary. The sanctuary was established to protect the largest assemblage of breeding seabirds in the contiguous United States as well as large concentrations of marine mammals that use these productive waters.

Expansion of sanctuary boundaries northward protects the source waters of a globally ecologically significant coastal upwelling center originating off Point Arena and flowing south into the Gulf of the Farallones. Upwelling currents carry nutrients from the deep to the surface at Point Arena and winds drive the surface currents south transporting nutrient-filled water along the southern Mendocino, Sonoma, Marin, and San Francisco coast to the waters over Cordell Bank and around the Farallon Islands and down through San Mateo County. These nutrients are the foundation for the food-rich environment of the north-central coast and offshore environment and promote the growth of organisms at all levels of the marine food web. The nutrients flowing from this upwelling center form the basis of support for a range of species, from plankton to predators. When upwelling winds relax, surface currents flow to the north and provide nutrients and food from the south to kelp bed inhabitants.

Including this area within GFNMS helps conserve and protect the wildlife and habitats within an interconnected upwelling cell by reducing impacts to habitats and species such as disturbance to the seabed, disturbance to wildlife, and discharges into the ocean. The sanctuary also increases education, outreach, and opportunities for community engagement in the management and protection of the coastal and ocean environment.



Bodega Head and Bay. Photo: NOAA

Description of GFNMS

Located in the waters west of San Francisco, and extending northward to Manchester Beach in Mendocino County, the GFNMS provides many examples of the marine life and habitats characteristic of cold temperate waters of the eastern Pacific marine region that extends from

Introduction

GFNMS Draft Management Plan

Point Conception to British Columbia. A large portion of the sanctuary lies in the Gulf of the Farallones between the western edge of the continental shelf and the coast of Marin and Sonoma counties. Some of the largest and most diverse eastern Pacific populations of seabirds and pinnipeds (seals and sea lions) south of Alaska occur in the Gulf. Large flocks of Cassin's Auklets, Common Murres, Western Gulls, and the endangered Brown Pelican feed on the small fish and crustaceans that are abundant in the surface waters of the sanctuary. This food source also supports California's largest breeding population of harbor seals, as well as the growing population of northern elephant seals. Large numbers of whales and dolphins, including the California gray whale, the Pacific humpback whale and the blue whale are found in the area. Around the Farallon Islands is one of the world's largest seasonal congregations of white sharks. There are also many significant nearshore habitats represented within the sanctuary, such as the inland reaching Estero de San Antonio and Estero Americano; Tomales Bay and Bolinas Lagoon; and the large intertidal and subtidal reef at Duxbury Reef.

The coastal and offshore habitats of northern California from Bodega Head, in Sonoma County, to Manchester State Beach, in Mendocino County include unique geological and biological features such as the influence of currents, seasonal upwelling, and weather patterns.

This unique combination of oceanographic conditions and undersea topography create conditions in the expansion area that support a rich and diverse assemblage of marine species. This includes a wide array of temperate cold-water species with occasional influxes of warm-water species. The species diversity is directly related to the diversity of habitats and oceanic conditions, and its location within a broad biogeographic transition zone (Point Arena to Año Nuevo). This transition zone provides a complex gradient of changing environments in which the relative proportions of species changes from north to south.

The Point Arena region serves as a source of upwelled, nutrient-rich ocean waters, which are transported by wind driven currents to the Gulf of the Farallones region over a period of five to seven days. Upwelling may be widespread at times, or localized at upwelling centers or "cells" (e.g., Point Arena). Upwelling offshore of Point Arena delivers deep, nutrient-rich cold water to the surface and supports high productivity off of Point Reyes and the Gulf of the Farallones region. San Francisco Bay is another important source of nutrients and organic matter in the Gulf of Farallones region. The nutrient rich waters support high concentrations of phytoplankton in the Gulf of the Farallones region and in turn support zooplankton and higher trophic prey species such as whales, fish and birds. During periods of calm winds, in the fall, surface currents relax and high concentrations of phytoplankton move northward from the Gulf of the Farallones and Cordell Bank region into the expansion area. Seasonal streams and rivers such as Salmon Creek, Russian River, Gualala River, and Garcia River are also important sources of nutrients and organic matter that support high productivity in the region.

The sanctuary also illustrates how important the ocean and its wildlife and habitats are for the economic and social well-being of the region. The sanctuary contains some of the West Coast's busiest shipping lanes. The area supports large commercial fisheries, including a large percentage of the San Francisco fleet. Sport fishing also generates revenue for the party boat fleets operating out of San Francisco Bay, Half Moon Bay, and Bodega Bay. Data from 2000 to

2011 show that about 200 commercial fishing vessels made landings in the ports adjacent to the expansion area on an average annual basis. These are unique vessels, spanning all gear types. Whale watching, diving, and offshore excursions are other uses that occur in the sanctuary waters.

History of GFNMS

In April 1978, NOAA initiated a proposal to designate the sanctuary. Based on public response and a recommendation by the CA Coastal Commission (CCC) to develop an environmental impact statement, NOAA prepared a draft environmental impact statement (DEIS) which described the proposed alternative of sanctuary designation and included draft regulations. The DEIS including a draft management plan was distributed for review in March through May 1980 with public hearings. As a result, the Point Reyes – Farallon Island Marine Sanctuary was designated on January 26, 1981. The proposal to expand GFNMS approximately 1,520 square miles offshore and north from Bodega Bay to Alder Creek was initiated with a notice in the *Federal Register* on December 21, 2012. Three scoping meetings were held from Bodega Bay to Point Arena during January and February 2013 to receive public comment on the proposed expansion. This draft management plan and the accompanying DEIS reflect the public input received.

Management Plan Reviews

The original management plan, developed in 1981 at the time of designation of the sanctuary, provided guidelines to ensure that all management actions undertaken in the first five years of designation were directed to resolving important issues as a means of meeting sanctuary objectives. Management objectives were considered in three areas: resource protection, interpretation, and research. The management plan also called for promulgation of regulations or prohibitions.

The 1992 congressional legislation that reauthorized the NMSA required that each of the thirteen national marine sanctuaries engage in a management plan review process periodically to reevaluate site-specific goals and objectives, management techniques, and strategies. In 2001 GFNMS embarked on its first management plan review since designation.

The Office of National Marine Sanctuaries (ONMS) reviewed the management plans of Gulf of the Farallones, Cordell Bank, and Monterey Bay national marine sanctuaries jointly, and published final management plans for each sanctuary in 2008. These sanctuaries are located adjacent to one another, managed by the same program, and share many of the same natural resources and issues. In addition, all three sites share overlapping interest and user groups. It was cost effective for ONMS to review the three sites jointly rather than to conduct three independent reviews.

The management plan review process provided GFNMS with the opportunity to: take a closer look at how the environment had changed over the past twenty years; understand the cause and effect relationship of human activity and natural perturbations on the marine ecosystem; and

Introduction

GFNMS Draft Management Plan

engage the public in the management decision making process. As a result, GFNMS reshaped its management structure and program areas, and revised its regulations.

During public scoping for the 2008 management plan the GFNMS received public comments and petitions to expand the sanctuary. As a result, analyzing boundary alternatives was included in the management plan. In December 2012, ONMS initiated a public process to expand GFNMS. After receiving public comment on the proposed expansion, ONMS produced this draft management plan and companion DEIS. This management plan evaluates management and operational strategies, regulations, and programs as it apply to the existing sanctuary as well as the proposed expansion area. Public and agency comments will be taken on the draft management plan and DEIS. The comments will be considered by ONMS, and, if warranted, a Final Management Plan (FMP) and Final EIS will be released to the public and submitted to Congress and the governor for review. Following a 45-day review period and completion of any necessary changes, the FMP and accompanying regulations will become effective.

Biogeographic Assessment

In support of the 2001 management plan review process, NOAA's Biogeography Program developed an assessment to identify important biological zones, time periods and ecological linkages within the three national marine sanctuaries and their encompassing biogeographic region. This geographic information systems (GIS) analysis extended from Point Arena in the north to Point Sal in the south, and identified key biological areas (e.g., areas of species richness and reproductive areas), time periods, and communities within the area of interest; focused on the continental shelf and slope. The results of the biogeographic assessment for seabirds and marine mammals have been integrated into this Draft Management Plan.

BUILDING A NEW MANAGEMENT PLAN

Vision Statement

The vision, goals and objectives that follow are based on the National Marine Sanctuary Act.

GFNMS' highest priority is ecosystem protection. The sanctuary with its partners protects habitats, biological communities, and ecosystem dynamics. Through the watersheds and out to the sea, GFNMS addresses current management issues and anticipates future challenges in order to maintain and protect a healthy marine environment now and for future generations.

GFNMS Goals and Objectives

GFNMS has clearly defined goals and objectives on which to develop program areas and regulations. These goals and objectives are broad and intended to be for the site as a whole. Specific goals and objectives were also developed for each issue or program area in the management plan. Consistent with the guiding legislation established in the NMSA, the mandate for the thirteen national marine sanctuaries, GFNMS has chosen the following priority goals:

- Improve the conservation, understanding, and wise and sustainable use of marine resources;
- Enhance public awareness, understanding, and stewardship of the marine environment;
- Maintain for future generations the habitat and ecological services of the natural assemblage of living resources that inhabit these areas;
- Maintain the natural biological communities to protect, and where appropriate, restore and enhance natural habitats, populations, and ecological processes;
- Provide authority for comprehensive and coordinated conservation and management of these marine areas, and activities affecting them, in a manner which complements existing regulatory authorities;
- Create models of and incentives for ways to conserve and manage these areas, including the application of innovative management techniques; and
- Cooperate with global programs encouraging conservation of marine resources.

The strategies of the GFNMS management plan are directed to meet these goals and objectives. It should be noted that although the sanctuary goals and objectives are listed discretely, they are overlapping. Collectively, the strategies developed in the management plan address the full range of goals and objectives set forth in the previous paragraph.

Regulations and Program Areas

The GFNMS management plan is made up of two complementary parts: regulatory and non-regulatory. The regulatory component includes site-specific regulations or prohibitions and general regulations that apply to all thirteen national marine sanctuaries (see 15 CFR Part 922 at <http://www.ecfr.gov>). Regulations are used to control or restrict human behavior that is not compatible with protection of sanctuary resources or qualities. The non-regulatory component of the management plan includes GFNMS' three program areas: Conservation Science; Education and Outreach; and Resource Protection. These three program areas are supported by an administrative framework which ensures that all ecosystem management activities are coordinated, and provides an appropriate infrastructure needed to help meet the goals and objectives set forth by this management plan. Collectively, the above-mentioned parts make up the whole of the management plan and are important tools for effective ecosystem management.

The regulatory and non-regulatory components of the management framework are structured to address the priority ecosystem management issues identified during the last management plan review in 2008, which include the following site-specific issues and programs: Water Quality; Wildlife Disturbance; Introduced Species; Ecosystem Protection; Impacts from Fishing Activities; Vessel Spills; Education and Outreach; Conservation Science; Resource Protection; and Administration. The priority cross-cutting action plans include: Maritime Heritage; Ecosystem Monitoring; Community Outreach; and Administration

Introduction

GFNMS Draft Management Plan

Addressing Goals and Objectives within an Ecosystem Context

The priority goals and objectives listed above lead GFNMS management to take an ecosystem-based approach to managing a fluid marine environment with great temporal and spatial complexity and diversity. The scientific community, natural resources agencies, and the public have recognized the importance of an integrated ecosystem-based approach to protect marine biodiversity and habitats. The emphasis on marine ecosystem management is consistent with other state and federal agencies' programs and initiatives.

Tools for Effective Management Planning

GFNMS' management plan was designed not only to protect the marine resources and biodiversity, but also to consider maintenance of economic equity, cultural integrity and human social structures. GFNMS management is looking at a wide range of activities that take place in the sanctuary and evaluates them in terms of whether they are compatible with ecosystem protection and protect the structure, function, and diversity of the marine environment. In order to better evaluate human-use activities and their impacts on the ecosystem, GFNMS used three strategic tools in the development of the management plan: science, socioeconomics and local knowledge.

Science

Protection of living and nonliving marine resources is the primary objective of the ONMS, and science serves an important tool for understanding, measuring, and predicting change in the status and health of the marine ecosystem. Scientific inventories, habitat characterization, research, and monitoring provide an important information base for natural resource managers to understand and evaluate effectiveness of management regimes. NOAA collected data from site programs, individual researchers and institutions throughout the region and, where possible, integrated it into GIS to spatially identify significant living and nonliving marine resources, habitats, and physical and geological features. These data were used to describe and define the ecosystem, identify areas of special significance, and locate important ecosystem support systems.



Sanctuary researchers monitor the rocky intertidal of the Farallon Islands. Photo: NOAA

Socioeconomics

In California, the total gross domestic product from the ocean economy accounted for approximately \$42 billion dollars in 2000. Coastal recreation and tourism alone brings in approximately \$12 billion to California annually. California's 3,427 miles of shoreline and 27.2 million people (76% of the population as of 2007) live in coastal regions. Economic activity is intense in these areas, accounting for 80.7% (11.8 million) of



Commercial fishing has long been an important industry in GFNMS. Photo: NOAA

all jobs and 85.8% of the state's Gross Domestic Product in 2007 (Pendleton 2007). These numbers paint an important picture about the need to properly manage the marine resources. A sustainable community recognizes both ecosystem sustainability and economic sustainability as mutually beneficial. The ONMS not only considers the potential economic cost of management restrictions on income generating activities, but also public benefits derived from long-term protection of nationally significant resources. A cost/benefit analysis may be found in the DEIS to determine socioeconomic impacts and benefits to user groups from any proposed actions in this management plan.

Local Knowledge

Local knowledge represents the voice of direct experience and interaction with the marine environment over time. Many of the community partners involved in the management plan have been linked to its waters prior to them becoming a marine sanctuary. Their knowledge is more extensive and long range than much of the scientific research available for the study area. GFNMS not only honors and incorporates historical knowledge, but also acknowledges that stakeholder groups have a strong connection and knowledge about their environment. These local voices also represent local interests, issues and concerns to be balanced against those from outside interests. The sanctuary advisory council members, local mariners, interest groups, and the public provided valuable input to the sanctuary.

Looking at the Next Five Years and Beyond

Since its establishment in 1972, the ONMS has been building models for better marine ecosystem-based management. But even today, with better knowledge of the natural world and more experience managing human behavior, the program continues to build new models to enhance ecosystem protection. This is why the GFNMS management plan is referred to as a "living document," serving as a dynamic and responsive framework to guide ecosystem-based management.

GFNMS' "living document" also serves as a proactive tool for planning a sustainable future. To ensure a sustainable future, GFNMS' "living document" will provide a framework for not only addressing ecosystem management issues of the present, but also anticipating those emerging issues of the future.

The emergence of new issues and other unforeseeable factors may affect specific aspects of sanctuary management as described in this plan. However, the overall goals, management objectives, and general guidelines will continue to be relevant. Throughout the next five to ten years of this plan, the aim is to carefully adjust the plan to changing circumstances in light of the experience gained through actual management. Additionally, modifications to the scope and scale of the action plans may have to be made due to unforeseeable changes in levels of funding. However, the goals and objectives of the management plan will remain unchanged.

SANCTUARY SETTING

PHYSICAL SETTING

Location

Gulf of the Farallones National Marine Sanctuary (GFNMS) lies off the California coast extending west off Mendocino, Sonoma, Marin, San Francisco and San Mateo Counties. Included are nearshore waters up to the mean high tide line from Manchester Beach in Mendocino County to Rocky Point in Marin County, and offshore waters extending out to and around the Farallon Islands and down offshore Half Moon Bay in San Mateo County.

Geology

The portion of GFNMS that is offshore of San Francisco is characterized by the widest continental shelf on the West Coast of the contiguous United States. In the Gulf of the Farallones region, the shelf reaches a width of 32 nautical miles (59 km) and narrows to a width of 15 nautical miles (28 km) in the Point Arena region. Shoreward of the shelf break and Farallon Islands, the continental shelf is sandy and contains large underwater sand dunes. The shelf slopes gently to the west and north from the mainland shoreline and provides an especially large and relatively shallow (120 meters) foraging and habitat area for coastal and oceanic seabirds, marine mammals, and fish.



Southeast Farallon Island provides a range of habitats for sanctuary inhabitants, including cliffs for seabird nesting, rocky shores for marine mammal haulouts and subtidal areas for fish and invertebrate shelter. Photo: NOAA

The Farallon Islands are seven islands and large rocks, which lie along the outer edge of the continental shelf, between 13 and 19 nautical miles (24 and 35 km) southwest of Point Reyes and roughly 26 nautical miles (48 km) due west of San Francisco. The islands are located on part of a larger submarine ridge that extends for approximately 30 nautical miles between the Farallon Islands and Cordell Bank near the shelf break. The Farallon Islands provide secluded habitat that is essential for seabirds and marine mammals. Submarine rock outcrops surrounding the islands and extending to Cochrane Bank, Rittenburg Bank, Cordell Bank, and “The Football” provide rich habitat for a diverse rocky reef community.

The GFNMS coast includes sandy beaches, rocky cliffs, open bays (Bodega Bay, Drakes Bay, and Bolinas Bay) and enclosed bays or estuaries (Bolinas Lagoon, Tomales Bay, Estero Americano, and Estero de San Antonio). High-energy waves typical of the winter storm season distribute sediment washed into the sanctuary by rivers and from shoreline erosion and move sand down-coast from beach to beach. The two Esteros are typically closed during summer and fall by seasonally formed sand bars, isolating the estuaries from the ocean. Other rivers not found

within the boundary of the sanctuary but influence conditions within the sanctuary, and are seasonally closed in some years include: Alder Creek, Garcia Creek, Gualala River, Russian River, and Salmon Creek. Tomales Bay and Bolinas Lagoon, however, remain open to the ocean year-round. Water and water-borne materials in these rivers, streams, bays and lagoon are exchanged with the open ocean through tidal currents, although inner bay and lagoon waters may take a long time to exchange. The open bays are sheltered from prevailing southerly currents by headlands and points projecting westward and are important nutrient and plankton retention areas. Tomales Bay, Bolinas Lagoon and Bodega Bay lie directly on the San Andreas Fault.



The Eesteros provide important nursery habitat for sanctuary fish species and forage habitat for local and migratory birds. Photo: NOAA

Climate and Oceanography

The Gulf of the Farallones National Marine Sanctuary is located in the California Current, one of the world's four major wind-driven upwelling systems, the other three systems being located along the west coasts of South America, southern and northwest Africa. Northerly winds drive a shallow surface layer that moves offshore due to the Coriolis effect. This offshore (Ekman) transport of surface waters results in the upwelling of cold, nutrient-rich waters from depth into sunlit surface waters to support a food-rich environment and promote the growth of organisms at all levels of the marine web. The Point Arena region serves as an area that originates upwelled, nutrient-rich waters that are transported to the Gulf of the Farallones region over a period of five to seven days (Halle and Largier 2011). Upwelling may be widespread at times, or localized at upwelling centers (e.g., Point Arena). Upwelling offshore of Point Arena delivers nutrients to the light filled surface waters that are important in supporting high productivity off Point Reyes and into the Gulf of the Farallones region.

San Francisco Bay is another important source of nutrients and organic matter in the Gulf of Farallones region. The result is that high concentrations of phytoplankton are observed in the Cordell Bank and Gulf of the Farallones regions near the water surface, making them available to zooplankton and higher trophic prey species such as whales, fish and birds. During periods of calm winds, specifically during the fall high concentrations of phytoplankton move from the Gulf of the Farallones and Cordell Bank regions northward into the water off of Marin, Sonoma and Mendocino Counties. Seasonal streams and rivers such as Salmon Creek, Russian River, Gualala River, and the Garcia River are also sources of nutrients and organic matter, delivered to the system and support high productivity.

During the spring-summer upwelling season (typically March 15-August 14), strong northwest winds drive surface waters offshore and cold deep waters are upwelled to the surface over the continental shelf. The California Undercurrent (also called the Davidson Current) carries cold high-salinity waters north at depth along the shelf-edge and is a source for upwelled waters. These waters are rich in nutrients and feed very high levels of primary production near-surface.

The resultant phytoplankton blooms are the foundation of the rich GFNMS food webs, involving zooplankton, benthic and pelagic invertebrates, fish, birds, and mammals.

Spring-summer currents over the middle and outer shelf strongly move southeastward during upwelling, but nearshore flow patterns are mixed. San Francisco Bay and other nearshore outflows are carried both north and south by prevailing coastal currents and eddies. During brief periods of weak winds (relaxation periods), much of the inner and mid-shelf Gulf of the Farallones waters reverse direction and flow north. Phytoplankton levels peak during these relaxation periods.

In the fall, upwelling winds weaken and water temperatures increase. Sometimes known as the oceanic season, this period (typically August 15-November 15) is characterized by onshore flow of oceanic surface waters (warmer and lower salinity). Periods of upwelling winds and phytoplankton blooms do still occur during the fall.

Winter in the GFNMS is characterized by the passage of rain-bearing cold fronts, accompanied by westerly and southerly winds which drive surface currents northward and downwelling over the shelf. After the fall transition period and the cessation of the upwelling winds, the Davidson Current comes to the surface with a weak northeastward flow. While storm fronts characterize the months of December through March, upwelling winds are equally common and many upwelling events are also observed at this time of year (although lower levels of light in winter produce only weak phytoplankton blooms). During the downwelling events, warm oceanic surface waters move onshore and land runoff is held nearshore. Large plumes of terrestrial runoff from the mainland are also subject to the Coriolis effect, hence San Francisco Bay and Russian River outflow typically remains close to shore. Water originating from San Francisco Bay flows north around Point Reyes after major rain and runoff events. On occasion the influences of the San Francisco Bay outflow extend west to the Farallon Islands. Lowest surface seawater salinities are observed in the GFNMS during the winter runoff season.

Eddies are found both offshore, in the core of the California Current, and in the waters over the shelf. In the coastal waters of the GFNMS, fast flow past headlands like Point Reyes and Bodega Head may create eddies that move through the region. Eddies and open embayments partly retain nutrient-rich, upwelled waters and help explain the high levels of plankton, fish, mammals and birds observed in this region year-round. The sanctuary contains bottom features of higher rugosity (slope variability), and counter-clockwise eddies north and south of Bodega Head, Point Reyes, Pillar Point, and Pigeon Point. As a result, the sanctuary is one of the most productive areas along the California Coast, and in the world.

BIOLOGICAL SETTING

Sanctuary Ecosystems

The coast of the Gulf of the Farallones is a complex array of habitats from exposed rocky headlands to protected sandy beaches; from open bays to calm estuaries; from rocky intertidal

habitats to productive mudflats; from offshore islands to submerged seamounts; and from the continental slope dissected by numerous submarine canyons to the deep sea.

Rocky Shores

The intertidal habitat between the low and high tides is biologically rich, supporting diverse assemblages of algae, plants and animals. It is characterized by extreme conditions caused by wind, waves, and the fluctuation of tides. Organisms living in the intertidal face many challenges that are unique to living at the edge of the ocean, including threat of desiccation, physical wave action, and limited space. Rocky shores are found throughout the Gulf of the Farallones sanctuary but particularly at Duxbury Reef, Bodega Head, Sea Ranch, Salt Point, and Point Arena.

Four zones of rocky intertidal organisms are traditionally associated with different tidal heights. Species distributions are restricted according to physiological tolerance along the thermal and moisture gradient in the intertidal zone. The splash zone is almost always exposed to air, and has relatively few species. The high intertidal zone is exposed to air for long periods twice a day. The mid-intertidal zone is exposed to air briefly once or twice a day. The low intertidal zone is exposed only during the lowest tides (See Appendix III-H for the rocky intertidal species list).

Splash Zone

The periwinkle, *Littorina keenae*, and the barnacle, *Balanus glandula*, can be used as an indicator of the splash zone. Microscopic algae are common in the splash zone in winter months when large waves produce consistent spray on the upper portions of the rocky shore. Black Oystercatchers and Black Turnstones are the common birds along the rocky shoreline off central and northern California. These birds are most abundant during fall and winter, and during this period, are accompanied by small numbers of Ruddy Turnstones, Surfbirds, and Wandering Tattlers. Black Oystercatchers nest along rocky coasts including the Farallon Islands (Sowls et al. 1980). A variety of species commonly considered land birds also feed along rocky shores, including Black Phoebe, American Crow, Brewer's Blackbird and European Starlings.

High and Middle Intertidal Zones

Perennial macrophytes exhibit conspicuous zonation in the rocky intertidal community. Descending into the intertidal are several zones dominated by (1) furoid and ceramial algae in the high intertidal; (2) a dense turf of erect coralline and gigartinal algae in the mid-intertidal; and (3) beds of *Postelsia palmaeformis* (sea palm), rhodymenials, and laminarials in the low intertidal zone. Intertidal invertebrates also exhibit conspicuous zonation. In northern California, the barnacle, *Balanus glandula*, and red algae, *Endocladia muricata* and *Mastocarpus papillatus*, are used as indicators of the high intertidal zone, but these species are also found in other areas of the rocky shore. At wave-exposed sites, the mussel, *M. californianus*, can dominate the available attachment substratum in the mid-intertidal zone. Intertidal predators generally include whelks, sea stars, sea urchins, octopus, fishes, and shore crabs.

Low Intertidal Zone

The low intertidal zone is subjected to nearly constant wave action and exposed only for short periods of time during the lowest tides. The presence of the seagrass, *Phyllospadix* spp., is a good indicator of the mean low water level.

Sandy Beaches

North-central California beaches exhibit classic structure: cliffs or dunes demarcate the upper boundary of the beach; the mean high tide line is generally indicated by a berm; and beach flats, troughs, or sand bars form the seaward side of the beach. Exposed sand beaches are harsh environments subjected to high wave action, wide temperature range, and periodic tidal exposure. Quiet-water beaches of estuaries and bays are protected environments subjected to less wave action.

Species distributions within the sandy beach habitat are strongly influenced by physical factors on exposed sand beaches, whereas biological factors, e.g., competition and predation, influence species distributions on protected beaches of estuaries and bays. Exposed beaches of northern California show distinct patterns of biological zonation defined by the amount of tidal inundation to each region. The biological zones of the sandy beach habitat are: upper intertidal beach zone, mid-littoral beach zone, swash zone, low intertidal beach zone, and the surf zone.

Upper Intertidal Beach

The upper intertidal beach is submerged for a short time and exposed to the widest range of temperatures. It is often sparsely inhabited, because the food supply on sandy beaches is unpredictable. The major sources of food on the sandy beach include plankton, macroalgae, and occasional corpses of fishes, birds, and marine mammals that are washed ashore by waves. As a result, the upper intertidal is primarily dominated by scavengers on beach wrack, such as talitrid amphipods, flies, isopods, and Coleopteran beetles (Berzins 1985). When beach wrack washes ashore, it is colonized first by the highly mobile talitrid amphipods and flies (Diptera).

Eventually, the beach wrack is colonized by terrestrial isopods and Coleopteran beetles. The pill bug, *Alloniscus perconvexus*, burrows into the sand just beneath the surface and emerges at night to feed on beach wrack. During the day, beach hoppers (genus *Megalorchestia*) are usually in shallow burrows or under piles of macroalgae. At night, the hoppers emerge to forage on algae and other detritus.

Mid-Littoral Beach

The mid-littoral beach zone is characterized by a moderate inundation time, but is subject to many of the same rigors as the upper zone (e.g., temperature extremes and fresh water). The mid-littoral beach fauna is dominated by species with high mobility such as the cirolanid isopod, *Excirolana*, which are preyed upon by various shorebirds. The mid-littoral zone fauna must be highly mobile because this zone is subjected to rapid sediment removal during storms.

Swash Zone

The swash zone, where waves break on the beach, is characterized by the highest water movement and is submerged approximately twelve hours per day (Oakeden and Nybakken 1977). Thus, the swash zone is not subjected to extreme temperatures and salinity characteristic of the high- and mid-littoral zones. The dominant species in the swash zone is the sand (mole) crab, *Emerita analoga*, an herbivorous species that forms the basis for much of the sandy intertidal food web.

Low Intertidal Zone

The low intertidal zone is subjected to nearly constant wave action and exposed only for short periods of time during the lowest tides. Most of the inhabitants of the low intertidal are either rapid burrowers or protected against injury. Numerous invertebrate species burrow into superficial sediments and flourish in wave-disturbed sand bottoms (Slattery 1980).

Surf Zone

The surf zone is submerged continuously and experiences constant motion of waves breaking against the sea floor. Many studies suggest that sandy beach surf zones are low diversity environments, dominated by small planktivores and benthic feeding fishes and their predators (Gunter 1958, McFarland 1963, Edwards 1973a, Modde and Ross 1981, Lasiak 1983, McDermott 1983). The trophic structure of surf zone fish communities appears to be controlled primarily by three factors: (1) primary production input to the surf zone; (2) water movement; and (3) geomorphology of the sandy beaches.

Over 180 bird species were observed on beaches between Bodega Head and the northern Santa Cruz County border from October 1993 to September 1999 (Roletto et al. 2000). Sanderlings, Western Gulls, and Brown Pelicans were observed most frequently. Most of the bird species that occur in coastal wetlands (especially Sanderlings, Willets and Marbled Godwits) also occur on outer sand beaches (Davis and Baldrige 1980). Snowy Plovers, which have decreased significantly during the past two decades, nest in coastal dunes.

Breeding populations of pinnipeds are found on sand beaches off northern California. The species most commonly found along Northern California beaches, rocks and mudflats include California sea lions (*Zalophus californianus*) and harbor seals (*Phoca vitulina*).

Estuaries Including Bays, Mudflats, and Marshes

Bays and estuaries are among the most productive natural systems. Their physical, chemical, and biological characteristics are critically important to sustaining living resources (Mann 1982, Weinstein 1979). Bays and estuaries are important nursery areas that provide food, refuge from predation and a variety of habitats. The four main estuaries within the sanctuary are Tomales Bay, Estero Americano, Estero de San Antonio, and Bolinas Lagoon.

Tomales Bay is located between the shores of West Marin and the Point Reyes National Seashore (PRNS). Tomales Bay is an example of a fault-controlled valley along the San Andreas Fault. Lagunitas Creek, which drains into Tomales Bay, supports a run of approximately 10 percent of California's current Coho salmon population. Dense seagrass meadows are found throughout Tomales Bay. Pacific herring use the seagrass beds for spawning. Tomales Bay also supports seasonal populations of salmon, steelhead, sardines, and lingcod. The shallow bay's sandy bottom attracts a variety of bottom-dwelling fish including sole, halibut, skates and rays. Leopard sharks are common in Tomales Bay and occasionally blue sharks are sighted. White sharks, although not found in enclosed bays or estuaries, do hunt for seals and sea lions that frequent the bays to haul out on the sandy beaches and rocks near the mouth of Tomales Bay. Over 20,000 shorebirds and seabirds, including loons, grebes, geese, cormorants, and ducks, spend the winter in Tomales Bay.

The Esteros Americano and de San Antonio are coastal estuaries located on Bodega Bay. Estero Americano drains into Bodega Bay at the Sonoma-Marin County line. South of Estero Americano, Stemple Creek becomes the Estero de San Antonio, also draining into Bodega Bay. Many different habitat types are found in the esteros including mudflats, marshes, rocky shore, coastal scrub, and grasslands. With the variety of habitats, the esteros support many species of plants, invertebrates, fishes, birds, and mammals. They provide essential feeding and resting areas for shore and sea birds. Some common fish species found in the esteros include Pacific herring, staghorn sculpins and starry flounder. The endangered tidewater goby breeds in the shallow waters of Estero de San Antonio.

Seagrass beds occur on the extensive mudflats in Tomales Bay, Bolinas Lagoon and within the esteros. Seagrass supports a unique and diverse assemblage of invertebrates and fishes, including snails, shrimp, nudibranchs and sea hares. The structure of seagrass beds provides protection from predation, especially for juvenile invertebrates and fishes. Pacific herring, invertebrates, and birds depend on seagrass beds in Tomales Bay to spawn and feed.

The soft bottom habitats associated with estuarine environments support large concentrations of burrowing organisms, such as clams, snails, worms, and crabs. Benthic invertebrates in estuaries have a large effect on community structure.

Willetts and Marbled Godwits are among the most abundant large shorebirds in northern California estuaries whereas Sanderlings, Western Sandpipers, Least Sandpipers, Dowitchers, and Dunlins are the most abundant small shorebirds in wetlands and the outer coast beaches from Point Reyes to Manchester State Beach. There are some differences within estuaries in the abundances of shorebirds. Horned and Eared Grebes, American Coots, and numerous ducks (including Buffleheads, Goldeneyes, Pintail, Mallard, and Cinnamon Teal dominate the coastal bird assemblage in shallow, tidal waters of local sloughs and estuaries while egrets and herons use brackish and salt marshes as roosting and feeding habitats during high tides [Davis and Baldrige 1980]). The time of migration and the routes of travel between breeding and wintering grounds seasonally affect the patterns in abundance of shorebird species in northern California (Ramer et al. 1991). Most species of wintering shorebirds move into California from August

through March and leave wintering grounds for northern breeding grounds between late March and early May.

Fish assemblages in estuaries of the Gulf of the Farallones and Point Arena regions exhibit similar trophic structure and taxonomic structure. The most abundant estuarine fish are juvenile planktivores or low-level carnivores on infaunal invertebrates (Yoklavich et al. 1991). Fish assemblages exhibit higher abundance and species richness during the summer with the invasion of young-of-the-year marine species (Allen and Horn 1975, Hoff and Ibara 1977, Allen 1982, Onuf and Quammen 1983, Yoklavich et al. 1991). Species richness (diversity of species) and the change in species composition decline with distance from the ocean (Loneragen et al. 1986, Blaber et al. 1989, Yoklavich et al. 1991). The mouths of bays and estuaries are strongly influenced by marine hydrographic processes (Broenkow 1977), and are therefore more accessible to coastal marine species.

Kelp Forests

The rocky nearshore environment of northern California is characterized by dense forests of kelp growing at depths from 2 meters to more than 30 meters (Foster and Schiel 1985). The bull kelp, *Nereocystis luetkeana*, is the dominant canopy-forming kelp north of Santa Cruz to the Aleutian Islands (Foster 1982). The shallow areas inshore of kelp forests are often characterized by canopies of the feather boa kelp, *Egregia menziesii*, and other Laminariales (Foster and Schiel 1985). Extensive kelp forests occur along the Sonoma and Mendocino County coasts.

Kelp forests are spatially complex communities. They alter turbulent flow patterns in the nearshore region through drag generated by their large size and frequently high densities (Duggins 1988). The biological ramifications of this type of hydrodynamic influence are potentially very important to a wide range of nearshore organisms. Disruption of flow by kelp forests is likely to have significant effects on feeding and growth (particularly in suspension and deposit feeders), dispersal and recruitment (Duggins 1988). Food and dispersal stages of many kelp forest organisms are passively dispersed, and their transport and settling characteristics will be determined largely by the movement of water in which they are suspended. Kelp beds may retain larvae released within the bed, and the strong deceleration of flow at the margins of the bed could facilitate settlement of larvae imported from outside the bed (Duggins 1988). The concentration of zooplankton at the upcurrent edge of a kelp bed, and the corresponding higher densities and feeding rates of fish in that area, are probably results of alterations of current flow by kelp (Bray 1981). Predation risk may increase the association between certain species and kelp forests because predation (by fish, birds, and marine mammals) is lower in spatially complex environments such as kelp beds (Gooding and Magnuson 1967, Wickham and Russell 1974).

Kelp forests harbor a large potential source of invertebrate and fish prey for birds (Foster and Schiel 1985). Gulls, terns, Snowy Egrets, Great Blue Herons and cormorants are associated commonly with kelp forests (Foster and Schiel 1985). Other species (e.g., phalaropes) feed on the plankton and fish larvae associated with kelp.

Harbor seals (*Phoca vitulina*) and California sea lions (*Zalophus californianus*) are common in and around kelp forests off northern and central California. Harbor seals feed on fishes in the kelp forest whereas California sea lions probably limit their use of the kelp forests to transitory feeding (Foster and Schiel 1985).

Gray whales (*Eschrichtius robustus*) have been observed entering kelp forests to feed on invertebrates such as mid-water crustacean swarms and to escape predation from killer whales (*Orcinus orca*).

Open Ocean

The habitat covering the largest area within the GFNMS is the open continental shelf and the pelagic (open ocean) habitat. This habitat is strongly influenced by the oceanographic patterns of the northern California coast (for more detail, see Climate and Oceanography section above). The strong upwelling events stimulate the productivity of organisms at all levels of the marine food web. Cool, nutrient-rich, upwelled waters support high primary productivity.

All the food that drives the biology of the deep ocean originates in the very thin, near surface layer, the euphotic zone, which is defined as the zone where sunlight can penetrate.. Therefore, the feeding conditions of the ocean floor are linked with that primary production occurring in the euphotic zone. Deep-sea communities depend on the distribution and quantity of primary production, the rate of movement of organic material to the bottom, and the conditions of deposition and transformation of the organic matter in the sediment.

Distribution and abundance of zooplankton are related to the physical dynamics of the California Current system (Reid et al. 1958, Parrish et al. 1981, Huntley et al. 1995). Zooplankton are usually most abundant in neritic and inshore regions (Colebrook 1977), as compared with waters of the offshore California Current. Large populations of zooplankton are associated with subarctic water and intense upwelling along the northern/central coast of California extending to Point Conception (Reid et al. 1958, Loeb et al. 1983a).

Crustacean larvae, euphausiids (or krill), and copepods are dominant groups in the epipelagic zone (Colebrook 1977). Euphausiid swarms often concentrate near Cordell Bank, the Farallon Islands (Rice 1977, Kieckhefer 1995) and in Monterey Bay, due to high local productivity and oceanographic characteristics of the regions (e.g., upwelling, fronts, canyons, and vertical walls). Distributions of the euphausiids, *Euphausia pacifica* and *Thysanoessa spinifera*, vary seasonally in response to both temperature and light availability. Changes in euphausiid behavior can reduce the availability of prey in surface waters to predators such as seabirds (Ainley et al. 1996, Veit et al. 1997) and rorqual whales (Schoenherr 1991, Croll et al. 1998).

California blue whales respond to the seasonal patterns in productivity in foraging areas along the west coast of North America. Blue whales exhibit strong seasonal migration feeding primarily on euphausiids in the Gulf of the Farallones and migrating to the lower latitudes where they feed on “upwelling-modified” waters (Fielder et al. 1998, Croll et al. 1998), mate and give birth (Lockyer 1981). California humpback whales follow similar migration patterns as the blue whales and primarily feed on small schooling fish and euphausiid prey in the Gulf of the

Farallones and migrate to Mexican and Central American waters to mate and give birth (Kieckhefer 1992).

The composition of fish species in the pelagic zone varies throughout the year with migration and spawning and from year to year with environmental fluctuations. A small number of migratory pelagic species dominate the fisheries of central and northern California, including northern anchovy (*Engraulis mordax*), Pacific sardine (*Sardinops sagax*), Pacific hake (*Merluccius productus*), and jack mackerel (*Trachurus symmetricus*). These pelagic species spawn in the Southern California Bight and migrate into waters off central and northern California. However, the composition of larval fish species off central and northern California varies with oceanographic conditions.

The deep-sea pelagic invertebrate fauna is dominated by the following Phyla: cnidarians (or coelenterates), ribbon worms (Nemertean), ctenophores, chaetognaths, mollusks, annelids (including Polychaetes), and crustaceans. The cnidarians include hydroids, sea anemones, corals, jellyfishes, and their relatives. The mollusks include marine snails (Prosobranchia), sea slugs (Opisthobranchia and Pulmonata), clams (Bivalves), chitons (Polyplacophora), squids and octopuses (Cephalopods including the Decapods, Octopods, and Siphonophora). The crustaceans include barnacles (Cirripedia), isopods, amphipods, copepods, shrimps (Caridea), ghost shrimps (Macrura), hermit crabs (Anomura), and true crabs (Brachyura).

Continental Shelf and Slope Communities (0-200 meters)

The continental shelf off central and northern California is generally quite gradual, and the bottom substrate is a combination of varying amounts of sand, silt, and clay. Much of the mud and sand on the continental shelf was deposited by rivers that formed during the melting of the glaciers approximately 18,000 years ago (Eittem et al. 2000). At water depths between about 40 to 90 meters, the continental shelf off central California is covered by a nearly continuous blanket of mud as much as 30 meters thick. In areas of high wave energy, mud and sand may be resuspended and transported away from the shore. A zone of outcropping bedrock and sands is located seaward of the mud accumulation zone, on the far outer shelf where water depth exceeds 90 meters.

Sandy Continental Shelf Communities

Although sandy sediments may appear less productive than rocky reefs and kelp forests, numerous organisms are adapted to the shifting environments on the sandy shelf. Some animals find shelter by living in tubes and burrows. Clams lie permanently buried with their siphons extended to the surface of the sediment. Some crustaceans and mollusks live beneath the sand, emerging at night to forage. Flatfishes are camouflaged on the sandy surface of the sea floor. Ocean shrimp (*Pandalus jordani*) are found in California from depths of 240 to 750 feet. Spot prawns are found in depths of 150 to 1,600 feet and concentrate in the regions around the Farallon Islands and offshore banks. Many species of fish prey on ocean shrimp, including Pacific hake, arrowtooth flounder, petrale sole, sablefish, and several rockfishes.

Many species of flatfishes (Pleuronectidae and Bothidae) use the soft-bottom habitats along the continental shelf. English sole (*Parophrys vetulus*) are distributed from northwest Alaska to San Cristobal Bay, Baja California, in waters as deep as 1,800 feet. Spawning of English sole generally occurs over sand and mud-sand bottoms at depths of 200 to 360 feet from September to April (Pearson et al. 2001).

Dungeness crabs (*Cancer magister*) are commonly found in a variety of habitats, but populations are concentrated on sandy to sandy-mud bottoms from the intertidal to a depth of 300 feet. Dungeness crabs are opportunistic feeders, consuming clams, fish, isopods, and amphipods.

Rocky Continental Shelf Communities

Along the northern California coast, rocky reefs support extensive macroalgal growth and associated abalones, sea urchins, and rockfishes.

Juvenile red abalone settle as postlarvae on coralline algae in crevices between rocks (Haaker et al. 2001). Sea urchins are abundant subtidal herbivores that play an important ecological role in the structure of kelp forest communities. Red sea urchins (*Strongylocentrotus franciscanus*) are found on rocky shores of open coasts from the low-tide water line to 300 feet deep. Purple sea urchins (*S. purpuratus*) are found on rocky shores with moderately strong surf from the low-tide line to 525 feet deep.

Fish commonly found in the rocky habitats of the continental shelf at Cochrane Bank, Rittenburg Bank and “The Football” include surfperches, rockfish (black and shortbelly), cabezon, and bocaccio. The surfperches (Embiotocidae) are small abundant fishes found predominantly in temperate eastern North Pacific waters. Schools of black rockfish (*Sebastes melanops*) frequently occur 10 to 20 feet above shallow rocky reefs. Shortbelly rockfish (*Sebastes jordani*) are found in greatest abundances between the Farallon Islands. The peak abundance of adults is over the bottom at depths of 400 to 700 feet. Adults commonly form very large schools often near or on the bottom during the day. At night, aggregations of shortbelly rockfish may loosen as the fish move up in the water column. Cabezon (*Scorpaenichthys marmoratus*) are found on hard bottoms in shallow water from intertidal pools to depths of 250 feet. Cabezon are common in subtidal habitats in and around rocky reefs and kelp beds. Bocaccio (*Sebastes paucispinis*) ranges from Kodiak Island, Alaska, to central Baja California. These rocky habitats also include a wide variety of invertebrates such as deep-sea corals (*Antipathes dendrochristos*, *Chromoplexaura marki*, *Stylaster* spp., *Swiftia* spp., and *Paragorgia* spp.) and sponges (*Iophon piceus* var. *pacifica*, *Halichondria panacea*, *Heterochone calyx*, *Staurocalyptus fasciculatus*, *Xestospongia diprosopea*, and *Acanthascus fasciculatus*).

Continental Slope Communities (200-2000 meters)

At a depth of about 200 meters, the continental slope drops steeply to the sea floor. The deep waters of the continental slope are characterized by extremely low light conditions, nearly freezing temperatures, and very high pressures (Laidig 2002). Continental slope species eat less frequently, are slower at digesting their food, and move more slowly than species in warmer

waters. In order to achieve sexual maturity and successful reproduction under conditions of reduced growth, continental slope species may live longer than species in warmer waters.

The invertebrate infaunal and epifaunal communities along the continental slope include many species such as polychaete worms, pelecypod and scaphopod mollusks, shrimp, and brittle stars.

Productive commercial fisheries for deep-sea fish operate on the continental slope. The species targeted include deep-sea rockfishes such as Cowcod (*Sebastes levis*) and Blackgill rockfish (*Sebastes melanostomus*), thornyheads (genus *Sebastolobus*), sablefish (*Anoplopoma fimbria*), and Dover sole (*Microstomus pacificus*). Many of these species occupy similar habitats and generally are caught together.

Submarine Banks, Canyons, and Seamounts

Submarine banks and shoals are found near the shelf break along a submarine ridge that extends for approximately 30 nautical miles between the Farallon Islands and Cordell Bank. The vertical structure of Fanny Shoal, Rittenburg Bank, Cochrane Bank, “The Football”, and the submerged rocky outcrops surrounding the Farallon Islands provide rich habitat for a diverse rocky reef community.

To the west of the Farallon Islands and the continental shelf, the seafloor drops precipitously to depths over 6,000 feet. Submarine canyons and gullies indent the steep continental slope of the Farallones Escarpment.

Pioneer and Guide Seamounts are found west of the sanctuary. These underwater islands of volcanic origin are home to colorful, long-lived invertebrates and other marine life adapted to living in dark, deep waters. Due to the difficulty in studying these remote habitats, it is possible that these seamounts harbor marine life that is yet unknown to science.

Living marine resources

Marine and Coastal Birds

One of the most spectacular components of the sanctuary’s abundant and diverse marine life is its nesting and migratory seabirds (see Appendix III-G for a complete species list). The Gulf of the Farallones supports the largest concentration of breeding seabirds in the contiguous U.S. These birds forage in the Gulf of the Farallones and are highly dependent on the productive waters of the sanctuary. Eleven of the sixteen species of seabirds known to breed along the U.S. Pacific coast have breeding colonies on the Farallon Islands and feed in the sanctuary. Breeding colonies include Ashy and Leach’s Storm-Petrels; Brandt’s, Pelagic, and Double-crested Cormorants; Western Gulls; Common Murres; Pigeon Guillemots; Tufted Puffins; and Cassin’s and Rhinoceros Auklets. The Black Oystercatcher, a moderate-sized shorebird, also nests on the Farallon Islands.



Common Murres breed on the Farallon Islands and other craggy promontories within the sanctuary. They are particularly vulnerable to impacts from oil spills.
Photo: NOAA

The sanctuary also protects foraging habitat for aquatic birds such as waterfowl, shorebirds, pelicans, loons, and grebes. These habitats are pristine compared to most coastal wetlands in California and provide habitat for thousands of migrating and wintering birds. More than 170 species of birds use the sanctuary for shelter, food, or as a migration corridor. Of these, over 50 species of birds are known to use the sanctuary during their breeding season.



GFNMS was originally designated to protect the seabirds of the Gulf of the Farallones. Here are a few examples. Northern Fulmar (left) forage within the open waters of the sanctuary, Snowy Egrets (center) inhabit the shallow estuarine waters, and Western Gulls and other birds fill the skies above the sanctuary. Photos: NOAA

Four marine and aquatic bird species that are federally listed as threatened or endangered can be found in the sanctuary (May 2013). These include the Marbled Murrelet, Western Snowy Plover, Short-tailed Albatross, and Dark-rumped Petrel.

Marine Mammals

Thirty-six species of marine mammals have been observed in the GFNMS. This includes six species of pinnipeds (seals and sea lions), twenty-eight species of cetaceans (whales, dolphins, and porpoises), and two species of otter (southern sea otter and river otter). Pinnipeds and cetaceans occur in large concentrations and are dependent on the productive and secluded habitats for breeding, pupping, hauling out, feeding, and/or resting during migration. The Farallon Islands provide habitat for breeding populations of five species of pinnipeds, and support the largest concentrations of California sea lions and northern elephant seals within the sanctuary.



Common marine mammals of the GFNMS include California and Steller sea lions (left), gray whales (center), and longbeaked common dolphins (right). Photo: NOAA

Fish Resources

Fish resources are abundant over a wide portion of the Gulf of the Farallones. Because of the comparatively wide continental shelf and the configuration of the coastline, the sanctuary is vital to the health and existence of salmon (Chinook and Coho), northern anchovy, rockfish, and flatfish stocks. The extension of Point Reyes and the resulting current patterns tend to retain larval and juvenile forms of these and other species within the sanctuary, thereby easing recruitment pressures and ensuring continuance of the stocks. Sanctuary waters offshore of the Farallon Islands act as a location for shallow and intertidal fishes which further enhance finfish stocks.



The rockfish group of fish (Sebastes spp.) are among the most diverse fish species in the sanctuary nearshore and deep habitats. Photo: NOAA



White sharks migrate to the Gulf of the Farallones in the fall to prey upon the marine mammal populations. Photo: NOAA

The sanctuary includes many diverse habitats, thereby contributing to the region's high productivity. Bays and estuaries are especially important as feeding, spawning, and nursery areas for a wide variety of finfish. Common fish species of the major bays and estuaries include the Pacific herring, smelts, starry flounder, surfperch, sharks and rays, and Coho salmon. The rocky intertidal zone supports a specialized group of fish adapted for life in tide pools, including monkey face eels, rock eels, dwarf surfperch, juvenile cabezon, sculpins, and blennies. Many of these stocks are important as forage for shorebirds and seabirds. Subtidal habitats support large populations of juvenile finfish (e.g., flatfish, rockfish, etc.). Nearshore pelagic environs are habitat to large predatory finfish such as sharks, tunas, and mackerel. Northern anchovies, Pacific mackerel, and Market squid are abundant and can be commercially valuable. Pelagic fish resources in the study area generally parallel species living in the nearshore subtidal zone. At the mid-depth or meso-pelagic range over sand and mud bottoms, Bocaccio, Chilipepper, Widow rockfish, and Pacific hake are abundant. Kelp beds substantially increase the useable habitat for pelagic and demersal species and offer protection to juvenile finfish.

Marine Flora

Significant algal and plant communities within the sanctuary include kelp beds, salt marshes, and seagrass beds. The importance of these plants, algae, and microscopic phytoplankton for habitat and food cannot be overstated.

Kelp forests include the giant kelp species bull kelp. The highest concentration of kelp beds in the sanctuary occurs along the mainland coast between Fort Ross and Point



Kelp forests in GFNMS are dominated by bull kelp (Nereocystis luetkeana). Photo: NOAA



The intertidal algae the sea palm is a State-species of special concern and is found in pockets along the GFNMS rocky shores

Arena. As noted above, these kelp beds provide important habitat and food for many invertebrate and finfish species.

Salt marshes offer food and protected habitat for many coastal species during vulnerable lifecycle stages. For example, some flounders breed near salt marshes to allow juveniles to develop in the marsh system. Herons, sandpipers, duck, rails, and geese are also dependent upon the marsh for feeding and breeding.

Seagrass beds are situated on subtidal estuarine flats, in bays, and coastal inlets. Seagrass beds provide important breeding and nursery habitat for organisms such as herring, which attach their eggs to eelgrass. Although some marine organisms feed directly on seagrass, the principal food chain supported by seagrass is based on detritus.

Benthic Fauna

Benthic fauna communities refer to invertebrates living directly on or in the seafloor. Benthic fauna communities differ according to habitat type and exist in all habitats of the sanctuary (bays and estuaries, intertidal zones, nearshore, and offshore). Generally, each habitat area supports differing benthic assemblages of most classes, e.g., worms, clams, or crabs. The most conspicuous species include abalone, crabs, and sea urchins. Hundreds of other species (including sea stars, clams, amphipods, and shrimp) are critical links in the food chains of fish, birds, and mammals.



Sea urchins are important grazers in the intertidal ecosystem. Photo: NOAA

HUMAN SETTING

A wide range of human-use activities occur in and around the waters of the GFNMS. The San Francisco Bay metropolitan area exerts considerable user influence on the scale and intensity of uses (often competitive) occurring in the area. The major near and offshore activities include commercial fishing and mariculture, commercial shipping, recreation, and research. Additional details on the extent of human-use activities in the sanctuary can be found in the introduction of each action plan.



Fishing vessels can be seen plying sanctuary waters for fish throughout the seasons. Photo: NOAA

Commercial Fishing and Mariculture

The most important commercial harvests include Pacific herring, salmon, flatfish, albacore, tuna, red urchin, groundfish and Dungeness crab. Most of the commercial catches harvested in the sanctuary are landed in the four port complexes of Fort Bragg, Bodega Bay, San Francisco, and

Sanctuary Setting

GFNMS Draft Management Plan

Princeton/Half Moon Bay area ports. Data from 2000 to 2011 show that about 200 commercial fishing vessels make landings in the ports adjacent to the sanctuary on an average annual basis. These are unique vessels, spanning all gear types (California Fishery Information System Database 2013). A number of mariculture operations in Tomales Bay and Drakes Estero raise oysters, mussels, and other shellfish.

Commercial Shipping



Large cargo ships daily transit the sanctuary enroute to and from the Port of San Francisco. Photo: NOAA

Three major shipping lanes converge just west of the Golden Gate Bridge at the approach to San Francisco Bay. The northern and western lanes pass through GFNMS. The volume of traffic in and out of San Francisco Bay is large, totaling approximately 8,000 transits of vessels greater than 300 gross registered tons in calendar year 2010. Roughly one-half (~4000 per year) of these transits are in the western shipping lane, which passes south of SE Farallon Island, while one-quarter (~2000 transits per year) are in the northern and southern lanes, respectively (USCG 2010). Almost 60% of the commercial vessel traffic in and out of San Francisco Bay is from high speed (18-26 knots) container, car carrier and cruise ships, while 30% is from slower (13-16 knots) bulkers and tankers. The remaining 10% is from tug and barge operations (SFMX 2012).

Recreation

The sanctuary is a popular recreation area because of its many outstanding natural features and its proximity to the San Francisco Bay metropolitan area. More than 68 coastal access points in Mendocino, Sonoma, Marin, San Francisco, and San Mateo Counties provide direct access and views of the sanctuary. Most of these access points are located in federal, state, county, and local parks.



Kayaking is a popular way to experience the sanctuary. Photo: NOAA

Sport fishing is one of the more popular activities in the sanctuary. King salmon and rockfish are the major species taken. Whale watching, Farallon Islands wildlife viewing, sailing, and oceanic birding excursions account for several thousands of visitors venturing offshore. The major recreational uses include beach-related activities, bird watching, coastal hiking, wildlife viewing, tide pooling, surfing, kayaking, canoeing, boardsailing, clamming, diving, and surf fishing. On some weekend days, more than 1,000 clam diggers harvest geoduck, gaper, Washington, and littleneck clams

Research and Monitoring

The diversity of physical and biological habitats throughout the sanctuary offers an outstanding

opportunity for scientific research on marine and estuarine ecosystems. Several academic institutions, government agencies and nongovernmental organizations have ongoing monitoring and research programs in the area. Research on the Farallon Islands (Farallon National Wildlife Refuge) is coordinated by the U.S. Fish and Wildlife Service (USFWS), through a Cooperative Agreement with Point Blue Conservation Science. The sanctuary collaborates with these and other institutions on conducting monitoring and research to help characterize the wildlife and habitats of the sanctuary and to help understand natural and human factors responsible for causing changes in the marine environment.

Ongoing research and monitoring are performed not only by the sanctuary but other federal, state and regional agencies such as USFWS, National Park Service, California Coastal National Monument, National Marine Fisheries Service, Environmental Protection Agency, State Department of Fish and Wildlife, State Water Quality Control Board, and Sonoma County Water Agency. Non-government groups performing research and monitoring in the sanctuary include: Farallones Marine Sanctuary Association, Point Blue Conservation Science, Ecotrust, The Marine Mammal Center, California Academy of Sciences, Reef Check, State Parks Stewards of the Redwoods, Sea Ranch Association and Task Force, Madd River Consulting, City of Point Arena, Mendocino Coast Audubon Society, and Point Arena Lighthouse Keepers. Academic institutions includes: California State University at Monterey Bay, Partnership for Interdisciplinary Studies of Coastal Oceans, Stanford University, San Jose State University, San Francisco State University, and the University of California at Davis, Bodega Marine Laboratory.



Sanctuary scientists collect data on the rocky shores of the Farallon Islands to answer important resource management questions. Photo: NOAA

JURISDICTIONAL SETTING

Federal

United States Coast Guard (USCG)

The USCG holds broad responsibility for enforcing all federal laws throughout the sanctuary and assists NOAA in the enforcement of sanctuary regulations. USCG provides on-scene coordination with regional response center facilities under the National Contingency Plan for removal of oil and hazardous substances in the event of a spill that threatens sanctuary resource.

National Marine Fisheries Service (NMFS)

The NMFS has responsibility under the Magnuson-Stevens Fishery Conservation Act (MSFCMA), for approving, implementing and enforcing fishery management plans (FMPs) prepared by regional fishery management councils to ensure protection of fishery resources in the Exclusive Economic Zone. NMFS also shares responsibility with the United States Fish and

Sanctuary Setting
GFNMS Draft Management Plan

Wildlife Service (USFWS) for the implementation of the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA) to prevent taking of any endangered, threatened or otherwise depleted species.

Environmental Protection Agency (EPA)

The EPA has regulatory responsibilities with regard to sewage outfalls (under the U. S. Clean Water Act [CWA]) via National Pollutant Discharge Elimination System (NPDES) Permits, and ocean dumping (under Title I of the Marine Protection, Research, and Sanctuaries Act) to protect water quality.

Farallon National Wildlife Refuge (USFWS)

The USFWS has responsibility for managing the Farallon National Wildlife Refuge. The refuge includes: North, Middle, and Southeast Farallon Islands; Maintop Island; and Noonday Rock. The refuge is operated primarily as a migratory bird refuge to protect murres, auklets, guillemots, puffins, and other birds, and secondarily, to protect seal, sea lion, and other marine mammal assemblages.

Golden Gate National Recreation Area (GGNRA)

The National Park Service (NPS) is responsible for the management of the GGNRA. The GGNRA manages approximately 80,000 acres within the GGNRA boundary, which includes lands in San Francisco, Marin, and San Mateo counties. Non-federal lands within the GGNRA boundary are managed by other public agencies such as the City and County of San Francisco, California Department of Parks and Recreation, and San Mateo County.

Point Reyes National Seashore (PRNS)

The NPS is responsible for the management of the PRNS. PRNS includes the entire Point Reyes peninsula, with the exception of Inverness, Bolinas and Tomales Bay State Park. In addition, certain tide and submerged lands have been legislatively conveyed by the state to PRNS.

State

California Coastal Commission

The California Coastal Commission (CCC) was established under the California Coastal Act, which gives authority to the commission to establish policy for activities in state waters. In addition, seaward of state jurisdiction, federal development and activities directly affecting the coastal zone must be conducted in a manner consistent with these policies to the maximum extent practicable.

California State Lands Commission (SLC)

The California State Lands Commission (SLC) administers land including the beds of all waterways of the state below ordinary high water mark as well as tidelands (located between the mean high and low tide lines) and submerged lands (located below the mean low tide line and extending 3 nautical miles seaward). These sovereign state lands are held by the state “in trust” for the benefit of the public.

California Department of Fish and Wildlife (CDFW)

The CDFW regulates commercial fishing, including the taking of tidal invertebrates for commercial purposes, under a licensing system. CDFW also regulates sport fishing through license and bag limit systems. A sport fishing license is required for the taking and possession of fish for any non-commercial purpose. CDFW also leases state water bottoms for the purpose of mariculture.

California Department of Parks and Recreation

California Department of Parks and Recreation manages 280 park units, including over 280 miles of coastline. Responsible for almost one-third of California's scenic coastline, California State Parks manages the state's finest coastal wetlands, estuaries, beaches, and dune systems.

STRUCTURE OF THE ACTION PLANS

This management plan is constructed around a set of action plans that outline how Gulf of the Farallones National Marine Sanctuary (GFNMS) will be managed. Each action plan outlines how different strategies will be conducted and proposes performance indicators as a measure of management effectiveness.

DEVELOPMENT OF ACTION PLANS

The following issues and program areas are addressed in this management plan:

- A. Water Quality
- B. Wildlife Disturbance
- C. Introduced Species
- D. Ecosystem Protection: Impacts from Fishing Activities
- E. Impacts from Vessel Spills
- F. Education and Outreach (Program)
- G. Conservation Science (Program)
- H. Resource Protection (Program)
- I. Administration (Program)
- J. Administration and Operations (Crosscut)
- K. Communication and Outreach (Crosscut)
- L. Ecosystem Monitoring (Crosscut)
- M. Maritime Heritage (Crosscut)

There are three types of action plans. Issue plans focus on a particular issue and require the involvement of more than one GFNMS program. Program plans represent the priority activities for the sanctuary's science, education, resource protection, and administration programs. Crosscut plans involve the three contiguous sanctuaries in central California, Monterey Bay, Cordell Bank, and Gulf of the Farallones.

OUTLINE OF ACTION PLANS

Each action plan is structured so that sanctuary staff and constituents may quickly and easily reference this document. Each action plan is divided into sections that are described in detail below.

Issue Statement/ Program Statement

The issue (or program) statement clearly and concisely provides an introduction about "why" this is an issue to be addressed by the sanctuary in the management plan. It may include a brief description of the current situation or problem, and areas that need attention.

Structure of Action Plans

GFNMS Draft Management Plan

Issue Description/ Program Description

The issue (or program) description provides a general background on what sanctuary management currently knows or understands about an issue. Program descriptions explicitly describe the types of actions already undertaken by sanctuary management and the general direction it would like to move in the future. It includes the status of natural resources, related human-use activities occurring in the sanctuary, and jurisdictional authorities pertinent to the specific issue.

Goals

The goal describes the desired future state of the sanctuary ecosystem and management relevant to the specific resource management issue or program area. The goal is a broad statement about a long-term desired outcome that may or may not be completely attainable.

Objectives

The objectives are measurable outcomes for evaluating progress and success in moving toward the future desired condition. Objectives will be achieved in a specific time frame to help accomplish the desired goal.

Strategies

This section is a description of how the objectives will be accomplished for the particular issue or program area. Each strategy addresses one or more objectives and is divided into specific activities for the sanctuary staff to carry out. Activities are developed and implemented to achieve the goals and objectives of the issue or program area.

Potential Partners

The potential partners are organizations that have been identified as possible partners and that have shown interest in contributing to the effort. This list does not limit the partners involved, but merely serves as a guide when implementing the action plan. Sanctuary management may partner with other organizations as work on the particular activity progresses.

Performance Measures

Each action plan includes a chart presenting the outcomes expected and the performance indicators that will be used to measure progress toward the outcome. This effort is being undertaken to measure the sanctuary's management effectiveness (e.g., the achievement of a planned effort or activity). The methodology to be used to assess the effectiveness of each strategy in achieving the desired goal is detailed below. The definitions for the performance measure terminology follow.

Strategy

The management action to address a particular issue.

<i>Performance Goal</i>	The over-arching, very broad target for the action plan.
<i>Desired Outcome (Objective)</i>	The more specific outcomes achieved within the scope of the performance goal.
<i>Outcome Measure</i>	A specific indicator that shows progress towards a desired outcome.
<i>How Measured</i>	Describes exactly how the outcome measure will be measured.
<i>Who Measures</i>	Identifies the staff or outside partner who will measure the outcome measure.
<i>Output Measure</i>	A specific product or tool that results from the activities. Its production demonstrates a completed objective.

IMPLEMENTATION OF THE MANAGEMENT PLAN

This plan is designed to guide management of activities in the sanctuary. Implementation of this new management plan will require cooperation and coordination among many federal, state, and local government agencies, as well as private organizations and individuals. Information exchange, sharing facilities and staff, and the coordination of policies and procedures within an ecosystem context are features of this management plan and each of its program areas. As this plan is being implemented, GFNMS management will work to facilitate all public and private uses of those resources that are compatible with the primary objective of resource protection.

Limitations

Although this management plan for GFNMS details the action plans for the four program areas, how these strategies are implemented may be affected by multiple factors. These include: (1) funding – the primary source of funding comes from congressional appropriations that may fluctuate from year to year; (2) the ability to forge new partnerships in which staff, facilities and financial resources may be shared; (3) the need to be responsive to the ever changing impacts on the sanctuary’s marine resources from both natural perturbations and human activities; (4) an increased understanding of the complexity of the ecosystem, habitats and living marine resources; and (5) learning better ways to manage the resources through experience, experimentation, and the sharing of knowledge. GFNMS staff, the sanctuary advisory council, the public, and GFNMS’ partners will, as appropriate, provide oversight and guidance for redirecting any management plan strategies.

Incremental Implementation Scenarios

Table 1 provides an outline of how the various strategies in the management plan will be implemented. The implementation of the strategies depends on various factors including:

Structure of Action Plans
GFNMS Draft Management Plan

1. Status of strategy implementation
2. Priority of strategy implementation
3. Coordination level necessary with partners for implementation, and
4. Funding source for strategy implementation

The status of the strategy indicates the amount of work completed or the level of implementation of a strategy at the time of the management plan review. Certain strategies and activities have been partially or wholly implemented prior to or during the management plan review. Other strategies are new as part of the updated management plan or may not be initiated until the future.

The priority of a strategy or action plan is indicated by the level of implementation based upon the funding or resources currently available. Full implementation of the management plan exceeds the resources available to the GFNMS therefore requiring some prioritization of the action plan or strategies. As resources become available, a greater level of implementation is possible. Table 1 outlines how much implementation could occur with the existing amount of resources and how increases in resources would affect the amount of implementation possible for each strategy or action plan.

Implementation of most of the strategies in this management plan will require some input or coordination from partners, particularly other government agencies, research institutions and non-government organizations (NGOs). Table 1 outlines the level of involvement expected from partners to achieve full implementation of each strategy. Many action plans and strategies are completely dependent on involvement from other agencies or dependent on research conducted by a research institution.

Funding for implementation of many of the strategies will require a mix of internal Office of Marine Sanctuaries (ONMS) funds as well as funding from external sources such as grants, the Farallones Marine Sanctuary Association (FMSA), or in-kind work from partner agencies. Table 1 highlights the probable source of funding as primarily internal or external or a mix of funding sources.

Table 1. GFNMS Management Plan Implementation Table

Table Legend			
Strategy Status:	Implementation Ranking:	Necessary Partnership Coordination:	Primary Funding Sources:
● – Existing w/o significant modification	H – High	● – Not possible w/o partners	● – External (e.g., grants)
◐ – Existing w/significant modification	M – Medium	◐ – Significant reliance on partners	◐ – Internal/External
○ – New or future (not yet implemented).	L – Low	○ – Little reliance on partners	● – Internal (increased budget)
			○ – Internal (base budget)

Action Plans		Activity Status	Level Funding Scenario 1	Moderate Increase Scenario 2	Substantial Increase Scenario 3	Partnership Coordination	Primary Funding Sources
Issue Area Action Plans							
Water Quality							
	WQ-1: Water Quality Monitoring Coordination	○	L	L	M	●	◐
	WQ-2: Harbor and Marina Water Quality	○	M	H	H	●	◐
	WQ-3: Land-based Discharges	○	L	L	M	●	◐
	WQ-4: ASBS Water Quality	○	M	M	H	●	◐
	WQ-5: Mussel Watch Monitoring Program	○	M	M	H	●	●
	WQ-6: Water Quality Working Group	○	L	L	M	●	○
	WQ-7: Water Quality Staff Support	○	M	M	H	○	○
	WQ-8: Water Quality Bibliography	○	L	M	H	◐	○
	WQ-9: Nonpoint Education for Municipal Officials (NEMO)	○	L	M	H	●	◐
Wildlife Disturbance							
	WD-1: Web-Based Database	○	L	M	H	◐	○
	WD-2: Volunteer Monitoring Programs	○	L	M	H	◐	○
	WD-3: Agency Monitoring Programs	○	L	M	H	●	◐
	WD-4: Interpretive Enforcement	○	H	H	H	●	◐
	WD-5: Wildlife Viewing Guidelines	◐	H	H	H	●	◐
	WD-6: Outreach and Media	◐	H	H	H	◐	◐
	WD-7: Coordinate SPN	●	H	H	H	◐	◐
Introduced Species							
	IS-1: Introduced Species Database	○	H	H	H	●	●

Structure of Action Plans
GFNMS Draft Management Plan

Action Plans		Activity Status	Level Funding Scenario 1	Moderate Increase Scenario 2	Substantial Increase Scenario 3	Partnership Coordination	Primary Funding Sources
	IS-2: Estuarine Detection and Monitoring	○	M	M	H	►	►
	IS-3: Intertidal Detection and Monitoring	○	M	M	H	►	○
	IS-4: Pelagic Detection and Monitoring	○	H	H	H	●	●
	IS-5: Early Detection Outreach Program	○	L	M	M	►	►
	IS-6: Technical Advisory Council	○	L	M	M	●	►
	IS-7: Rapid Response Plan	○	M	M	M	●	►
	IS-8: Regulatory Actions	○	H	H	H	○	○
	IS-9: Outreach to Prevent Introductions	○	M	M	H	►	►
	Ecosystem Protection: Impacts from Fishing Activities						
	FA-1: Resource Characterization	►	M	H	H	►	►
	FA-2: Socioeconomic Profile of Fishing Activities	○	M	M	H	●	►
	FA-3: Develop Compatibility Index	○	L	M	H	►	○
	FA-4: Address Impacts from Fishing Activities	○	M	H	H	►	►
	FA-5: Develop Maritime Heritage Model	○	M	M	H	●	○
	FA-6: Sanctuary Representation At Fisheries Management Meetings	○	H	H	H	●	○
	FA-7: Krill Harvesting Ban	○	H	H	H	●	►
	EP-1: Evaluate Marine Zoning	○	H	H	H	●	○
	EP-2: Living Resource and Habitat Protection Working Group	○	H	H	H	●	○
	EP-3: Estero Marine Reserves	○	M	H	H	●	○
	Impacts from Vessel Spills						
	VS-1: Expand Drift Analysis Model	●	L	L	L	●	●
	VS-2: Refine Spill and Drift Model	►	L	L	L	●	●
	VS-3: Profile Vessel Activity	►	L	L	M	►	○
	VS-4: Evaluate Vessel Routing Changes	►	M	H	H	►	●
	VS-5: Refine Resources At Risk Model	►	H	H	H	●	►
	VS-6: Participate in Regional Response Team	►	H	H	H	●	►
	VS-7: Revise Internal Emergency Response Plan	●	H	H	H	○	○
	VS-8: Integrate Beach Watch Data Into Area's Contingency Plan	●	M	H	H	►	►
	VS-9: Mariner Outreach	►	M	H	H	►	►
	VS-10: Maritime Trade Advisory Council Seat	○	M	M	M	►	○
	VS-11: Sanctuary Representation At Vessel Traffic Forums	○	H	H	H	●	●



ISSUE-BASED ACTION PLANS

GFNMS DRAFT MANAGEMENT PLAN

- I. Water Quality**
- II. Wildlife Disturbance**
- III. Introduced Species**
- IV. Ecosystem Protection: Impacts from Fishing Activities**
- V. Impacts from Vessel Spills**



WATER QUALITY ACTION PLAN

ISSUE STATEMENT

Water quality within Gulf of the Farallones National Marine Sanctuary (GFNMS) is generally good due to the rural nature of the coastline and strong currents of the open ocean. Nevertheless, depending on coastal currents, the 8 million people living in the Bay Area and the discharge of the San Francisco Bay Estuary (including agricultural wastes from the Central Valley and residual sediments and metals from historic mining) periodically impact the sanctuary. The coastal waters of the sanctuary, particularly the estuarine habitats of Bolinas Lagoon, Tomales Bay, Estero Americano, and Estero de San Antonio, are vulnerable to land-based nonpoint source pollution. Sources of concern include nonpoint source runoff, agriculture, marinas and boating activities, mining, and aging and undersized septic systems. Other potential threats to water quality include activities such as diversion of fresh water, spills, dumping, land use changes, and pollutants such as floating debris (e.g., plastics), pathogens, emerging pollutants (e.g., endocrine disrupters), and residual materials such as radioactive waste and chemical contaminants including bioaccumulative legacy pollutants (e.g., DDT, PCBs).

ISSUE DESCRIPTION

Impacts on Estuarine Environments

As with much of California and the nation, the sanctuary is threatened by nonpoint source pollution. Given the rural nature of the sanctuary's coastline, the greatest current threat is not from urban development, but from livestock grazing, agricultural activities, mining activities, and aging and undersized septic systems. Of special concern are the estuarine habitats of Bolinas Lagoon, Tomales Bay, Estero Americano, and Estero de San Antonio where circulation is more restricted than on the open coast and where organisms that rely on estuarine conditions are exposed to the relatively undiluted effects of polluted runoff. Due to restricted circulation, the estuarine environment is especially threatened by accidental spills from ships, land-based tanks or other sources, as well as by poorly regulated small-scale discharges such as oily bilge water, detergents from deck wash, runoff from shipyards, or sewage from boats, septic systems, or leaking sewers. Residual pollutants from past practices such as mining operations and diversion of freshwater have the greatest potential impact in restricted waterways such as estuaries and creeks. Several of these sources of impact have occurred in Tomales Bay, which has been identified by the State Water Resources Control Board as not in compliance with state water quality standards for mercury (from an abandoned mine), pathogens, sediment, and nutrients.

Impacts on Open Coastal Environments

The open coastal environments of the sanctuary are also threatened by nonpoint source pollution, but the threat is generally considered to be less (than for estuaries) due to the greater distance from most sources (mines, residential runoff, storm water runoff, septic systems, high density grazing) and greater water circulation. Nevertheless, the areas near the mouths of creeks, rivers such as the Russian River or estuaries can be subject to impacts from nonpoint source pollution.

Impacts on Offshore Environments

The greatest protection for the offshore waters of the sanctuary is the designation of the sanctuary itself. The size of the sanctuary and the restrictions placed on its use and protections for water quality provide additional oversight and protections to offshore waters. The offshore areas of the sanctuary are somewhat unaffected by land-based threats to water quality by their distance from the sources of land-based pollutants and runoff, as well as the continuous circulation of the offshore waters at many scales. Nevertheless, water quality in the offshore regions could be threatened or impacted by large or continuous discharges from the shore, spills by vessels, illegal dumping activities, or residual contaminants from past dumping activities. Discharges from sunken vessels and illegal discharges from oil tankers and cargo vessels have been a periodic source of negative impacts to marine organisms within the sanctuary. The threat of an offshore spill is a constant presence in areas near well-used shipping lanes. In the event of an oil spill, the impact to the open coast would mainly be determined by the wind and sea conditions, which could easily overcome protection efforts.

Persistent organic pollutants such as DDT and PCBs were widely used nationwide before the mid-1970s, and residuals of these chemicals still remain in sediments and organisms within the sanctuary. Elevated levels of pollutants have been reported for fish, seabirds, and marine mammals found within the sanctuary. The sanctuary should evaluate these reports to determine if they warrant recommendations for additional water quality protection efforts. Additionally, there are emerging pollutants whose effects should also be considered. Threats and strategies related to oil pollution are addressed under the issue-based action plan for Impacts from Vessel Spills and the program-based action plan for Conservation Science.

Impacts from the San Francisco Bay Area

To the east of the sanctuary there are treated wastewater discharges from the City of San Francisco that can have sewage overflows during large storm events, and outflow from the San Francisco Bay, potentially transporting pollution from the 8 million people living in the Bay Area. These include sewage outfalls, agricultural waste products from the Central Valley, and residual sediments and metals from historical mining. The bay has been identified by the State Water Resources Control Board as not in compliance with state water quality standards for several pesticides, metals, PCBs, and exotic species. The potential for the outflow from the bay to degrade sanctuary water quality needs to be evaluated.

Impacts from Floating Debris (e.g., Plastics)

Marine debris that threatens sanctuary resources may come from the San Francisco Bay outflow and local watersheds that drain into the sanctuary or from across the Pacific Ocean. The impact of plastic debris is a world-wide problem due to the many potential sources of debris, longevity of plastic in the marine environment, and impacts caused by plastics even as they degrade to smaller and smaller particles. Plastic particles may be ingested by marine organisms that select food by sight, filter feeders, or animals that live in the open water who mistake plastic for food. Plastic debris has also been shown to entangle marine wildlife. Sanctuary management should evaluate the potential local efforts that could be taken to reduce the impacts of marine debris on sanctuary wildlife.

JURISDICTIONAL SETTING

California's waters extend three miles seaward from the coastline (including the coasts of its islands). These are considered nearshore waters. Ocean water quality beyond three miles is regulated directly by the EPA, in consultation with the state and regional water boards. Beyond three miles from the mainland or the islands, EPA's water quality standards (for the receiving waters) and effluent limitations are applicable.

The following is an overview of the relevant federal and state laws and regulations that may apply to water quality. This is not a comprehensive review of all water quality related laws and regulations, and additional regulations could apply. The laws and regulations presented in this section are subject to change.

Federal Law

Rivers and Harbors Appropriations Act of 1899, 33 U.S.C §§ 401, 403

USACE acts in accordance with the provisions of the Rivers and Harbors Act, which regulates placement of structures or other work in addition to fill in "navigable waters," and the CWA (Section 404), which governs fill in "waters of the United States," including wetlands. A USACE permit is required if a project would place structures within navigable waters or if it would result in altering waters of the US below the ordinary high water mark in nontidal waters. The USACE does not issue these types of permits in cases where the USACE itself is the lead agency; instead it evaluates the project to determine compliance and acceptability. Typical activities requiring Section 10 permits are construction of buoys, piers, wharves, bulkheads, marinas, ramps, floats, intake structures, cable or pipeline crossings, and dredging and excavation.

Federal Water Pollution Control Act, commonly known as the Clean Water Act, 33 U.S.C § 1251 et seq.

The CWA requires California to submit statewide and basin plans to the EPA for approval.

The CWA differentiates between point source and nonpoint source pollution. Point sources of pollution are those that have a fixed discharge point. For example, sewage treatment plants (also called publicly owned treatment works) or industrial facilities (such as power plants or oil refineries) are considered point sources. The EPA definition is as follows:

POINT SOURCE POLLUTION is any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or concentrated animal feeding operation from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

NONPOINT SOURCE POLLUTION is simply any source of water pollution that is not point source pollution. Nonpoint source pollution results from, but is not limited to, land runoff, precipitation, atmospheric deposition, drainage, seepage, or hydrologic modification. Nonpoint sources of pollution are those that do not have a distinct pipe or other conveyance through which pollutants are discharged. Instead, the pollutants enter water over a large and diffuse area. Examples of nonpoint source pollution include, but are not limited to, air pollution fallout, timber harvesting, agriculture, grazing and small scale animal husbandry, boating and marinas, urban runoff, and hydro modification of streams and wetlands.

One commonly misunderstood category is urban stormwater runoff. Urban runoff has many of the same origins and problems as nonpoint source pollution. Together, nonpoint source pollution and urban runoff are the leading sources of pollution into California's waters. Originally, all urban runoff was considered a form of nonpoint source pollution. However, since 1987 the EPA and the State Water Resources Control Board have considered urban runoff collected in stormwater systems to be point sources of pollution. Urban stormwater systems, while collecting runoff over large and diffuse areas, do eventually drain through pipes or other distinct conveyances into natural water bodies. Hence, urban runoff is regulated as point source pollution.

Point source discharges are illegal under the Clean Water Act unless authorized by an NPDES permit. Under CWA Section 402 (33 U.S.C. § 1342), any discharge of a pollutant from a point source (e.g., a municipal or industrial facility) to the navigable waters of the United States or beyond must obtain an NPDES permit, which requires compliance with technology- and water quality-based treatment standards.

CWA Section 312 (33 U.S.C. § 1322) contains regulations protecting human health and the aquatic environment from disease-causing microorganisms that may be present in sewage from boats. Pursuant to Section 312 of the CWA, all recreational boats with installed toilet facilities must have an operable MSD on board. All installed MSDs must be Coast Guard-certified. Coast Guard-certified devices are so labeled except for some holding tanks, which are certified by definition under Section 312 of the CWA (33 U.S.C. § 1322). In 2012, under the authority of the CA Section 312, the USEPA established national No Discharge Zones (NDZs) within which sewage discharges are prohibited from all large passenger vessels (of 300 gross tons or greater) and from large oceangoing vessels (of 300 gross tons or greater) with available holding tank capacity or containing sewage generated while the vessel was outside of the marine waters of the State of California. In California, NDZs have been created for ten bays and harbors along the outer coast and for all state marine waters (i.e. within three nautical miles of the shore).

Section 303(d) of the CWA requires the states to submit to the EPA a list of water bodies that do not meet water quality standards for specific pollutants (i.e., are “impaired”). On November 12, 2010, USEPA approved the inclusion of all waters to California's 2010 303(d) list of impaired waters requiring TMDLs and disapproved the omission of several water bodies and associated pollutants that meet federal listing requirements. On October 11, 2011, USEPA issued its final decision regarding the water bodies and pollutants USEPA added to California's 2010 303(d) List. In the vicinity of the GFNMS, the following areas were identified in the 2010 303(d) List:

- Garcia, Gualala, and Russian Rivers are designated as impaired primarily due to sedimentation/siltation and water temperature. The Lower Russian River and Clam Beach (just north of Fort Ross State Historic Park) are listed for pathogens. Summary of sources listed: pasture and range grazing (upland and riparian), intensive animal feeding operations, manure lagoons, dairies, hydro-modification, removal of riparian vegetation, stream bank modification, erosion/siltation, and other nonpoint source.
- Bodega Harbor is designated as impaired primarily due to invasive speices. The sources are unknown.
- Estero Americano and Estero de San Antonio are designated as impaired primarily due to for nutrients and sediment (Stemple Creek is a listed tributary). Summary of sources listed: agriculture and related storm runoff, irrigated crops, land development, pasture and range grazing (upland and riparian), intensive animal feeding operations, confined animal feeding operations (point source), manure lagoons, dairies, hydro modification, channelization, wetland drainage/fill removal of riparian vegetation, stream bank modification, erosion/siltation, natural sources, and other nonpoint source.
- Tomales Bay is designated as impaired primarily due to pathogens, nutrients, mercury, and sediment (Walker and Lagunitas Creeks are listed tributaries). Summary of sources listed: agriculture, surface mining and mine tailings, intensive animal feeding operations, waste storage and disposal, upstream impoundment, and urban runoff/storm sewers.
- Central San Francisco Bay is designated as impaired primarily due to chlordanes, DDT, diazinon, dieldrin, dioxin, furan compounds, mercury, PCBs, selenium, and exotic species. Summary of sources listed: industrial and municipal point sources, atmospheric deposition, resource extraction, agriculture, other nonpoint sources, natural sources, and ballast water. Other portions of San Francisco Bay and many tributaries to the bay are also listed, but were not described here for brevity.

Total Maximum Daily Loads

Under the CWA, total maximum daily loads (TMDLs) are required to be developed for 303(d) listed water bodies. The purpose of a TMDL is to bring a water body back into compliance with the water quality objective for which it was listed. The development of a TMDL involves the identification of the various sources contributing to the water quality standard exceedance, including both point and nonpoint sources. The TMDL must also take into account the natural

background level and a margin of safety. Once a TMDL is developed, it must be approved and included in the Basin Plan. Implementation of the TMDLs will, by necessity, include public involvement and education, since many of our pollution problems are related to nonpoint sources and urban stormwater runoff, which are not regulated activities.

Title I of the Marine Protection, Research, and Sanctuaries Act, also known as the Ocean Dumping Act, 33 U.S.C. §§ 1401-1445

The Marine Protection, Research, and Sanctuaries Act (MPRSA) regulates the dumping of wastes into marine waters. It is the primary federal environmental statute governing transportation of dredged material for the purpose of disposal into ocean waters, while CWA Section 404 governs the discharge of dredged or fill material into all waters of the U.S. In 1983, a global ban on the dumping of radioactive wastes was implemented. The MPRSA and the CWA regulate materials that are disposed of into the marine environment, and only sediments determined to be nontoxic by USEPA standards may be disposed of into the marine environment. The USEPA and the USACE share responsibility for managing the disposal of dredged materials.

Oil Pollution Control Act, 33 U.S.C. § 2701 et seq.

The Oil Pollution Control Act of 1990 requires extensive planning for oil spills from tank vessels and onshore and offshore facilities and places strict liability on parties responsible for oil spills. See Impacts from Vessel Spills Action Plan for more information.

Act to Prevent Pollution from Ships, 33 U.S.C. § 1901 et seq.

The discharge of solid wastes is regulated under the APPS. The APPS regulates the disposal of plastics and garbage for the United States Annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL73/78). Under these regulations the disposal of plastics is prohibited in all waters, and other garbage, including paper, glass, rags, metal, and similar materials, is prohibited within 22 km (twelve nm; 14 miles) from shore (unless macerated).

Coastal Zone Management Act, 16 U.S.C. §§ 1451-1466

The Coastal Zone Management Act (CZMA) provides incentives for coastal states to develop and implement coastal area management programs. It is significant with regards to water pollution abatement, particularly concerning nonpoint source pollution.

Under CZMA, the National Oceanic and Atmospheric Administration (NOAA) provides federal funding for the development and implementation of state coastal zone management programs. The CCC has been charged with developing and implementing a state coastal plan in accordance with CZMA. The commission also has the authority to review federal activities in the coastal zone to ensure consistency with California's coastal zone management program.

Through the Coastal Zone Authorization Amendments of 1990 (CZARA), the Coastal Nonpoint Pollution Control Program was established to address the control of nonpoint source pollution.

The State Water Resources Control Board (SWRCB) and the CCC have submitted to the EPA and NOAA a Nonpoint Source Pollution Control Program Plan in accordance with CZARA Section 6217 requirements. The plan provides an outline for nonpoint source pollution management measures to be implemented over the next 15 years.²

The CCC addresses water quality issues through additional programs including:

- 1) Water Quality Unit, which provides technical assistance to district offices and statewide nonpoint source pollution coordination
- 2) Local Coastal Programs
- 3) Interagency Coordination Committee
- 4) Critical Coastal Areas
- 5) Model Urban Runoff Program
- 6) Contaminated Sediments Task Force
- 7) Snapshot Day
- 8) First Flush

Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9675

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) addresses cleanup of hazardous substances and mandates liability for environmental cleanup on those whose actions cause release into the environment. In conjunction with the CWA, it requires preparation of a National Contingency Plan for responding to oil or hazardous substances release.

Resource Conservation and Recovery Act, 42 U.S.C §§ 6901-6992K

The RCRA addresses hazardous waste management, establishing duties and responsibilities for hazardous waste generators, transporters, handlers, and disposers.

State Law

Porter-Cologne Water Quality Control Act, California Water Code §§ 13000-14958

The Porter-Cologne Water Quality Control Act contains provisions for enforcing water quality standards through issuance of Waste Discharge Requirements. Pursuant to the act, the SWRCB has the primary responsibility to protect California's coastal and ocean water quality. SWRCB has been given the authority by the USEPA to administer the NPDES program for California. The Regional Water Quality Control Boards, in coordination with the SWRCB, issue both state

waste discharge requirements and NPDES permits to individual dischargers. Dischargers are required to establish self-monitoring programs for their discharges and to submit compliance reports to Regional Water Quality Control Boards. The SWRCB has established regulations to implement these measures through water quality control plans, including the California Ocean Plan (Ocean Plan), the Regional Water Quality Control Plans (Basin Plans), and the Thermal Water Quality Control Plan (California Ocean Resources Management Program 1995). The Ocean Plan is applicable to nearshore ocean waters, but does not cover enclosed bays and estuaries. The Thermal Plan covers waste heat (e.g., from power plants) into all of the state's coastal waters. The Regional Board Basin Plans are applicable to freshwater bodies (e.g., streams and rivers) as well as enclosed bays and estuaries.

In addition, the state has a Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy). The State Implementation Policy includes the measures by which California implements the U.S. Environmental Protection Agency's (EPA) California Toxics Rule. The California Toxics Rule establishes water quality criteria for priority toxic pollutants.

The State Water Resources Control Board adopts the statewide water quality control plans and policies, such as the Ocean Plan, the Thermal Plan, and the State Implementation Policy. The regional boards adopt and submit basin plans to the state board for approval

Permits

Parties identified with point sources of water pollution into surface waters (ocean, bays, streams, and lakes) are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit. In California, the NPDES permits issued by the state and regional boards also double as Waste Discharge Requirements (WDRs). WDRs are required under Porter-Cologne for any discharges into surface or ground waters. Only activities that discharge in groundwater are issued WDRs, since the federal CWA (and therefore NPDES permits) only applies to surface waters. Under federal regulations, nonpoint source discharge into surface waters are also not issued NPDES permits. In California, regional boards may issue WDRs to nonpoint source dischargers. Alternatively, regional boards may allow certain nonpoint source dischargers to operate under conditional waivers.

Metropolitan areas in California having populations in excess of 100,000 people have been issued Phase I stormwater NPDES permits. San Francisco, the largest point source discharger near the GFNMS, is an unusual situation compared to other large California cities in that it has a combined storm sewer system, which handles both stormwater and sewage waste streams.

A draft Phase II general stormwater NPDES permit has been proposed to cover certain designated smaller municipalities in California serving populations of fewer than 100,000 people. Discharge to sensitive water bodies (e.g., Areas of Special Biological Significance) is one of the factors to consider when evaluating a municipality's designation status. There are other stormwater permits in the state as well. The California Department of Transportation (CalTrans) currently operates under a statewide permit covering both municipal and construction

related storm water discharges. Statewide general permits also are currently in effect for industrial and construction related storm water discharges.

State Water Resources Control Board and Areas of Special Biological Significance

On March 21, 1974, the State Water Resources Control Board decided that, “The list of Areas of Special Biological Significance (ASBS) will be used to identify for planning purposes, those areas where the regional water quality control boards will prohibit waste discharges...” There are currently a total of 34 ASBSs in California, nine of which are within the GFNMS waters including the boundaries in the proposed expansion area. These are at Saunders Reef, Del Mar Landing, Gerstle Cove, Bodega, Bird Rock, Point Reyes Headland, Duxbury Reef, Double Point, and the Farallon Islands.

An ASBS is a marine or estuarine area that is designed to protect marine species or biological communities from an undesirable alteration in natural water quality. The State Water Resources Control Board is responsible for designating these areas. In an ASBS, point source waste and thermal discharges are prohibited or limited by special conditions. Nonpoint source pollution is controlled to the extent practicable. No other use is restricted by the State in these areas.

The Ocean Plan prohibits the discharge of wastes to an ASBS. Discharges must be located a sufficient distance from an ASBS to ensure maintenance of natural water quality. Limited-term maintenance, repair and replacement activities (e.g., on boat facilities, sea walls, storm water pipes, and bridges) resulting in waste discharges in an ASBS may be approved by a Regional Water Quality Control Board. Such discharges are allowable only if they result in temporary and short-term changes in existing water quality, and do not permanently degrade water quality. All practical means must be implemented in order to minimize water quality degradation. The Ocean Plan does not regulate the discharge of vessel wastes, dredging, or the disposal of dredge spoil materials.

The Thermal Plan requires existing discharges of elevated temperature wastes to comply with limitations necessary to ensure protection of ASBSs. New discharges of elevated temperature wastes must be discharged a sufficient distance from an ASBS to ensure the maintenance of natural temperature in these areas. Additional limitations may be imposed in individual cases if necessary for the protection of ASBSs.

California Health and Safety Code §115880 et seq.

California has established minimum standards for the sanitation of public beaches, including: 1) requiring the testing of the waters adjacent to all public beaches for microbiological contaminants; 2) establishing protective minimum standards for total coliform, fecal coliform, and enterococci bacteria, or for other microbiological indicators; and (3) requiring that the waters adjacent to public beaches are tested for total coliform, fecal coliform, and enterococci bacteria, or for other microbiological indicators if appropriate. Since 2012, testing on beaches that are visited by more than 50,000 people annually and are located on an area adjacent to a storm drain that flows in the summer is required on a weekly basis from April 1 to October 31, inclusive, of each year.

California Coastal Act, Cal. Pub. Res. Code §30000 et seq.

The California Coastal Act (CCA) defines the “coastal zone” as the area of the state that extends three miles seaward and generally about 1,000 yards (910 meters) inland. The CCA of 1976 mandates protections for terrestrial and marine habitat through its policies on visual resources, land development, agriculture, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, power plants, ports, and public works. The Coastal Commission administers various programs, including Local Coastal Programs and the Water Quality Program, which facilitates the interagency Nonpoint Source Pollution Control Program. Almost all development within the coastal zone, which contains many wetlands, requires a coastal development permit from either the Coastal Commission or a local government with a certified Local Coastal Program.

California Marine Invasive Species Act, Cal. Pub., Res. Code § 71200 et seq.

See Introduced Species Action Plan.

California Ballast Water Regulations, CCR, Title 2, Division 3, Chapter 1, Article 4.6 et seq.

The master, operator, or person in charge of vessels arriving at a California port or place carrying ballast water from another port or place within the Pacific Coast must employ at least one of the following ballast water management practices: 1) exchange the vessel's ballast water in near-coastal waters (more than 50 nm from land and at least 657 feet deep), before entering the waters of the state, if that ballast water has been taken on in a port or place within the Pacific Coast region; 2) retain all ballast water on board the vessel; 3) use an alternative, environmentally sound method of ballast water management that, before the vessel begins the voyage, has been approved by the CSLC or the United States Coast Guard as being at least as effective as exchange, using mid-ocean waters, in removing or killing nonindigenous species; 4) discharge the ballast water to a reception facility approved by the commission; or 5) under extraordinary circumstances where compliance with the four options above is not practicable, perform a ballast water exchange within an area agreed to by the CSLC in consultation with the United States Coast Guard. “Pacific Coast Region” is defined in Article 4.6 as all estuarine and ocean waters within 200 nm of land or less than 2,000 meters (6,560 feet, 1,093 fathoms) deep, and rivers, lakes or other water bodies navigably connected to the ocean on the Pacific Coast of North America east of 154 degrees west longitude and north of 25 degrees north latitude, exclusive of the Gulf of California.

California Clean Coast Act, Cal. Pub. Res. Code §72400 et seq.

The California Clean Coast Act, which became effective on January 1, 2006, prohibits the release from large passenger vessels (cruise ships) and other oceangoing ships (300 gross tons or more) of hazardous waste, oily bilge water, other waste, and sewage sludge into the marine waters of the state and marine sanctuaries and sets up notification protocols for release of these substances into state waters or waters of a national marine sanctuary. The Clean Coast Act also prohibits the release of graywater from cruise ships and oceangoing ships with sufficient holding

capacity into the marine waters of the state. Furthermore, the Clean Coast Act requires the State Water Resources Control Board to request the appropriate federal agencies to prohibit the release of wastes from cruise ships and oceangoing ships into state marine waters and the four National Marine Sanctuaries in California. The Act is more stringent than federal regulation of cruise ships and also provides the strongest state protections from cruise ship pollution in the United States.

Sanctuary Regulations

The proposed sanctuary site-specific regulations affecting water quality are available for review in the proposed rule published concurrently with this document.

WATER QUALITY GOAL

1. Protect and enhance water quality in the estuarine, nearshore, and offshore environments of the sanctuary by engaging in corrective and proactive measures.

WATER QUALITY OBJECTIVES

1. Develop a regionally based, cooperative water quality protection plan to address past, present and future point and non-point source water quality impacts.
2. Emphasize a watershed/ecosystem approach and address the range of water quality threats from chronic land-based runoff to catastrophic offshore events.

WATER QUALITY ACTION PLANS

IMPACTS ON ESTUARINE AND NEARSHORE ENVIRONMENTS

STRATEGY WQ-1: *Develop an umbrella program to coordinate partnerships in implementing a comprehensive and integrated water quality monitoring program in order to track impacts on the estuarine and nearshore environment.*

Activity 1.1 Throughout the Marin, Sonoma, and Mendocino county watersheds adjacent to the sanctuary, and in the estuarine and nearshore environments within the sanctuary, are a multitude of volunteer and expert-based water quality monitoring programs. Through better coordination, both efficiency and effectiveness could be improved, and monitoring needs and data gaps identified and filled. Steps to be taken include:

- A. Inventory and evaluate existing volunteer and expert-based monitoring programs, including data collected, sampling duration and frequency, analyses performed, and ability to detect change over time.
- B. Identify sanctuary water quality monitoring data needs; evaluate against inventoried monitoring programs; and identify data gaps specific to sanctuary management needs.

- C. Develop strategy to fill data gaps, including partners and funding sources.
- D. Coordinate with agencies and water quality monitoring entities to: identify funding opportunities and potential collaborative partnerships; reduce sampling and analysis duplication; ensure quality assurance/quality control; and provide platform for data sharing.
- E. Use data to make informed management decisions specific to sanctuary issues and concerns.
- F. Extend Tomales Bay water quality monitoring program to other estuarine areas not fully monitored.
- G. Establish a forum for bringing together representatives of volunteer water quality monitoring programs in and adjacent to sanctuary watersheds, estuarine, and nearshore environments, to promote continued coordination and maximize program potential.

STRATEGY WQ-2: Address sources of anthropogenic pathogens and pollutants on estuarine and nearshore environments from recreational and commercial boating activities and marinas.

Activity 2.1 Impacts from discharges such as oily bilge water, detergents from deck wash, runoff from shipyards and marinas, and sewage affect Tomales Bay and Bodega Bay. The state is currently evaluating the need for sewage pumpout stations; the sanctuary will:

- A. Track the state's effort to survey and evaluate the need for a sewage waste and oily bilge pumpout station on Tomales and Bodega Bays.
- B. Become a cooperating partner with the state and make recommendations, as appropriate, on: where to locate pumpout stations; education and outreach efforts; tracking compliance; and maintenance of facilities.

Activity 2.2 Develop a combined outreach program on best management practices (BMPs) and interpretive enforcement for recreational and commercial user groups in and around Arena Cove, Gualala River, Russian River, Tomales and Bodega Bays (e.g., campers, kayakers) by taking the following steps:

- A. Inventory and evaluate existing BMPs and interpretive enforcement programs such as Dock Walkers.
- B. Develop partnerships with state agencies that participate in clean boating programs, such as Boating and Waterways, to develop and implement a BMP/interpretive enforcement outreach program.

STRATEGY WQ-3: *Coordinate with other agencies to address land-based discharges into the estuarine and nearshore areas of the sanctuary including Areas of Special Biological Significance (ASBS) and Critical Coastal Areas.*

Activity 3.1 Land-based discharges from stormwater, aging and undersized septic systems, agricultural runoff, livestock grazing, mining and freshwater diversion are impacting the sanctuary's estuarine and nearshore environments. The sanctuary will take the following steps to understand and address impacts from pathogens, sediments, nutrients, residual pollutants, and other contaminants such as pharmaceutical waste, micropollutants and pesticides:

- A. Participate in the Interagency Coordinating Committee (IACC), chaired by the SWRCB, and implement management measures on state's nonpoint source pollution plan.
- B. Identify, cooperate, and exchange information with agencies and authorities that pertain to land-based discharges and impacts on water quality.
- C. Assess levels of land-based discharges and impacts on sanctuary resources.
- D. Identify water quality enforcement issues that are not being addressed adequately or appropriately and communicate to appropriate agencies.

Activity 3.2 There are known industries and specific areas that have been identified as having detrimental impacts on sanctuary water quality. Problematic areas should be addressed and industries that discharge into the watersheds in and adjacent to GFNMS (e.g., dairies, agriculture, marinas, mining facilities), should be encouraged through letters and awards of recognition to employ best management practices [BMPs]). Steps to be taken:

- A. Inventory and become familiar with existing BMPs including: SWRCB Non-Point Source Plan, RWQCB's specific BMPs for selected areas, and UC Davis BMPs for dairies.
- B. Profile all activities, users, and areas that may be impacting water quality in estuarine and nearshore environments and establish criteria for compatibility with the sanctuary's primary purpose of ecosystem protection. Use criteria to evaluate those to be awarded and those areas where additional effort is needed.
- C. Coordinate with agencies and entities that have developed BMPs on the implementation and evaluation of effective management practices. Collaborate with agencies and entities on evaluating and rewarding for successful integration of BMPs in industries potentially impacting sanctuary waters.

Activity 3.3 There are specific developed and developing areas, such as Bolinas Lagoon and Dillon Beach, where land-use activity is increasing. These activities are creating additional pressure in the watersheds adjacent to the sanctuary, potentially impacting the estuarine and nearshore environments within the sanctuary. Steps to be taken to address impacts from land

development and encourage the use of BMPs during the planning, development and alteration of upland areas include:

- A. Identify and map specific upland areas adjacent to the sanctuary where development activities are taking place.
- B. Coordinate with agencies and entities that have developed BMPs on the implementation of effective management practices for land-use development. Collaborate with agencies and entities on evaluating and rewarding for successful integration of BMPs in land development adjacent to the sanctuary.
- C. Continue to track and evaluate development activities in watersheds adjacent to the sanctuary.

STRATEGY WQ-4: *Evaluate California-designated Areas of Special Biological Significance (ASBS) and make a determination whether to implement a vessel discharge prohibition, without exception, within these areas of concern.*

Activity 4.1 Develop a process to make a determination on the need for a prohibition on vessel discharge in California ASBSs within the sanctuary to protect sanctuary wildlife and habitat. Within California-designated ASBSs, point source waste and thermal discharges are prohibited or limited by special conditions and nonpoint source pollution is controlled to the extent practicable. Discharges of vessel wastes are not currently restricted. Additional GFNMS protections could augment the current state ASBS restrictions.

- A. GFNMS, in conjunction with the state and Regional Water Quality Control Boards, will initiate a process to evaluate the impacts to ASBSs from vessel discharges and determine whether a prohibition is needed.

IMPACTS ON OPEN OCEAN COASTAL ENVIRONMENT

STRATEGY WQ-5: *Ensure the continuation of the long-term data collection efforts under the Mussel Watch program.*

Activity 5.1 The Mussel Watch program represents one of the longest term national efforts to track the impacts from nonpoint source pollution on bioaccumulation in the marine environment. Originally spearheaded by NOAA, the state adopted the program and has been a major source of support, although the program has been eroded in recent years by funding cutbacks. Mussel Watch has supplied critical data on the health of coastal, bay, and estuarine waters of the state. The sanctuary should seek to continue this program by taking the following step:

- A. A water quality working group of the sanctuary advisory council should work together with the state to investigate reliable, long-term funding mechanisms to help perpetuate the state's Mussel Watch sampling stations within GFNMS.

ADDITIONAL AREAS TO BE ADDRESSED

STRATEGY WQ-6: *Support a potential water quality working group established by the sanctuary advisory council.*

Activity 6.1 Support a working group of experts representing other agencies and institutions that can advise the sanctuary advisory council on the development and implementation of a comprehensive and cooperative water quality protection plan. The working group will also provide advice on current, new, and emerging water quality issues. Objectives for the working group include:

- A. Develop specific water quality action plans for issues including: agriculture, urban areas, boating and marinas, marine debris, offshore impacts (radioactive materials, shipping, etc.), mining facilities and mariculture.
- B. Provide advice to the sanctuary advisory council for the sanctuary water quality program on current research, management techniques, and issues.
- C. Work with the state and counties on such issues as aging septic systems, discharge from live-aboards, urban runoff, moored vessels, total maximum daily loads (TMDLs), Critical Coastal Areas, agricultural runoff, and freshwater diversion.

STRATEGY WQ-7: *Develop administrative capacity to support a comprehensive and coordinated water quality protection plan.*

Activity 7.1 Hire a full-time water quality specialist/coordinator.

Activity 7.2 Create a water quality seat or ensure representation from water quality interests through agency or other seats on the GFNMS Sanctuary Advisory Council.

STRATEGY WQ-8: *Develop an annotated bibliography of water quality research and monitoring programs in and adjacent to the sanctuary to evaluate data and determine the overall water quality of the sanctuary's ecosystem.*

Activity 8.1 Inventory all short- and long-term water quality research and monitoring programs throughout the sanctuary including estuarine, nearshore, coastal, and open ocean environments to determine status, data gaps, and sanctuary needs. Monitoring is used to determine where water quality is threatened, and also to determine compliance with state and federal law from the CWA to the Porter-Cologne Water Quality Control Act.

- A. Evaluate GFNMS' current monitoring programs that have a water quality component and recommend appropriate changes in order to better address water quality data needs.
- B. Integrate the inventory of water quality research and monitoring programs into a Web-based database or SIMoN.
- C. Assess data needs and make recommendations to other agencies and institutions on data collection gaps.

STRATEGY WQ-9: *Educate local decision makers on land-based water quality impacts in the sanctuary.*

Activity 9.1 GFNMS will partner with the CCC and other agencies and institutions on Nonpoint Education for Municipal Officials (NEMO) to inform decision makers on the link between development/growth and water quality.

- A. Educate elected officials about the link between land use planning and the health of watersheds and coastal waters. Provide up-to-date and accurate information about specific issues and facts that pertain to water quality in the sanctuary.
- B. In areas where development is being planned, facilitate watershed planning and review of local regulations to promote better water quality and watershed protection.

Potential Partners:

Federal: National Park Service (NPS), Army Corps of Engineers, National Marine Fisheries Service (NMFS), United States Coast Guard (USCG), Environmental Protection Agency (EPA), Cordell Bank National Marine Sanctuary (CBNMS), Monterey Bay National Marine Sanctuary (MBNMS), National Oceanographic Data Center (NODC), Office of National Marine Sanctuaries (ONMS), NOAA Coastal Services Center (CSC),

State & County: CA Department of Fish and Wildlife (CDFW), CA Office of Oil Spill Prevention and Response (OSPR), CA State Parks (CSP), Regional Parks, CA Coastal Commission (CCC), California Department of Boating and Waterways (CDBW), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCB), State Health Dept. Harmful Algal Bloom (HAB) Program, UC Sea Grant, UC Cooperative Extension (UCCE), City and County of San Francisco, San Mateo County, Marin County, Sonoma County, Mendocino County, Sonoma County Agriculture Commissioner, Sonoma County Water Agency, Marin Resource Conservation District, SF Bay Conservation and Development Commission, Marin Rural Development Council, Marin Used Oil Program, Sonoma County Water Agency, Marin County Storm Water Pollution Prevention Program

Other: Bodega Harbor District, Bodega Marine Lab, Tomales Bay Watershed Council, Bolinas Bay Watershed Council, Bolinas Lagoon Technical Advisory Committee, Dock Walkers, Farallones Marine Sanctuary Association, Surfrider, Beach Watch, Snapshot Day, First Flush, kayak vendors, Students and Teachers Restoring a Watershed (STRAW)

GFNMS WATER QUALITY

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY WQ-1: Coordinate partnerships in implementing an integrated water quality monitoring program in estuarine and nearshore environments.	Engage in corrective and proactive measures to protect and enhance water quality in the estuarine, nearshore and other environments of the sanctuary.	Develop a regionally-based, cooperative water quality protection plan to address point and nonpoint source water quality impacts.	Collect sufficient data to make informed management decisions specific to protecting sanctuary resources.	1) Complete inventory of existing monitoring programs; identify data gaps; and identify sanctuary needs. 2) Establish collaborative partnership with agencies to create consistency, eliminate duplication, and leverage opportunities.	Ecosystem Protection Coordinator	Inventory (database) of water quality monitoring programs
STRATEGY WQ-2: Address sources of anthropogenic pathogens and pollutants from recreational and commercial boating activities and marinas.	Engage in corrective and proactive measures to protect and enhance water quality in the estuarine, nearshore and other environments of the sanctuary.	Emphasize a watershed/ecosystem approach and address the range of water quality threats from chronic land-based runoff to catastrophic offshore events.	Decrease, and over time, eliminate the discharge of pathogens and pollutants from recreational and commercial boating activities.	1) Become cooperating agency with state addressing the discharge of pathogens and pollutants. 2) Locate sewage waste and oily bilge pumpout stations in strategic locations. 3) Develop education and outreach effort targeting boaters. 4) Track compliance.	Ecosystem Protection Coordinator, Sanctuary Superintendent	1) Kiosk 2) Outreach materials 3) Sewage and bilge pumpout stations

Water Quality Action Plan
GFNMS Draft Management Plan

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY WQ-3: Coordinate with other agencies to address land-based discharges into the estuarine and nearshore environments of the sanctuary.	Engage in corrective and proactive measures to protect and enhance water quality in the estuarine, nearshore and other environments of the sanctuary.	Emphasize a watershed/ecosystem approach and address the range of water quality threats from chronic land-based runoff to catastrophic offshore events.	Decrease discharge of land-based pathogens, sediments, nutrients and residual pollutants on estuarine and nearshore environments in the sanctuary.	1) Establish formal relationship with water quality agencies and authorities to implement the state's nonpoint source plan. 2) Take corrective action on enforcement issues related to land-based discharges into the sanctuary. 3) Coordinate with agencies and entities that have developed BMPs on the implementation and evaluation of effective management practices.	Sanctuary Superintendent, Ecosystem Protection Coordinator	1) Outreach and recognition materials related to BMPs 2) Successful prosecution of sanctuary discharge violations 3) Decrease in number of violations
STRATEGY WQ-8: Develop an annotated bibliography of water quality research and monitoring programs in and adjacent to the sanctuary to evaluate if the data are complete enough to determine the overall health of the sanctuary's ecosystem.	Engage in corrective and proactive measures to protect and enhance water quality in the estuarine, nearshore and other environments of the sanctuary.	Develop a regionally-based, cooperative water quality protection plan to address point and nonpoint source water quality impacts.	Ensure data is sufficient to determine where water quality is both threatened, and where there is compliance with state and federal standards.	Inventory all short- and long-term water quality research and monitoring programs to determine status, data gaps and sanctuary needs.	Research Coordinator, Ecosystem Protection Coordinator	Comprehensive annotated bibliography



WILDLIFE DISTURBANCE ACTION PLAN

ISSUE STATEMENT

The pressure on marine wildlife continues to grow as the human population increases around coastal areas and access to nearshore and offshore environments becomes easier. Of specific concern to Gulf of the Farallones National Marine Sanctuary (GFNMS) are wildlife disturbances associated with: harvesting and collecting in tide pools and mudflats; trampling of the intertidal zone; impacts from hikers and beach users, dogs, boaters, and kayakers on birds and marine mammals; entanglements; vessel strikes, acoustic impacts; overflights; activities associated with increasing ecotourism; and the use of attractants or chumming.

ISSUE DESCRIPTION

Wildlife disturbance is caused by direct and indirect factors. Wildlife disturbance may be a result of natural events such as storms, fluctuations in water temperature, or physical/chemical changes to water. Wildlife disturbance may also stem from anthropogenic causes. Of these causes, human interaction with wildlife is the most manageable. Ways in which humans can impact wildlife include observing and feeding wild animals; encroachment on breeding areas and rookeries; collecting tide pool inhabitants; and trampling intertidal habitats.

In 2011, nearly 72 million U.S. residents – 23% of the population 16 years old and older – engaged in wildlife-watching activities such as observing or photographing wildlife. Over 6.5 million Californians watch wildlife, and hundreds of thousands of visitors watch wildlife as part of their travels to the state. California continues to attract more wildlife viewers and associated expenditures than any other state in the nation, and exceeded \$3.7 million in expenditures in 2011. Nature tourism activities in the sanctuary include: wildlife viewing from shore or boat, photography (wildlife and scenery), wildlife viewing from aircraft, beach visitation, kayaking and paddling. California and Florida are the top two states for nature tourism and wildlife viewing.

Attractants have been used for several decades around the Farallon Islands to attract white sharks (which seasonally migrate to the islands every fall primarily to feed on elephant seals) closer to vessels for both ecotourism and research purposes. The definition of “attract or attracting” under sections 922.81 and 922.131 of the NMSA, means conducting or attempting to conduct any activity that lures or may lure any animal in the sanctuary by using food, bait, chum, dyes, decoys (e.g., surfboards or body boards used as decoys), acoustics, or any other means, except the mere presence of human beings (e.g., swimmers, divers, boaters, kayakers, surfers). A

number of studies suggest that the presence of chum may be linked to modification of white sharks' normal swimming and/or hunting behaviors. Thus, minimizing potential disturbances to white sharks during this critical feeding time by limiting the permitted use of attractants is a priority issue for the Sanctuary.

Three major shipping lanes converge in the sanctuary just west of the Golden Gate Bridge at the entrance to San Francisco Bay. The volume of traffic in and out of San Francisco Bay has averaged about 7,000-8,000 vessels arriving and departing from San Francisco Bay over the past decade (See Vessel Spills Action Plan for more information). In recent years, the sanctuary is seeing an increase in cruise ship traffic. Cruise ship visitation to San Francisco Bay more than doubled in two years from 44 in 2002 to 91 in 2004. Since 2004, there has been a slight increase. Between 2008 and 2010, a yearly average of over 100 cruise ships transited in and out of San Francisco Bay, many headed north to destinations in the Pacific Northwest, Canada and Alaska. Although partly constrained by the lack of local docking facilities, cruise ship visits to the area are likely to continue to grow as the fleet shifts from international to more domestic cruises, and due to a new cruise ship docking facility opening in 2014 in San Francisco Bay.

Commercial vessel traffic along the west coast of the continental United States may negatively impact large whales, both through chronic exposure to engine and propeller noise and the increased risk of injuring or killing marine mammals through collisions (ship strikes). Vessels can also potentially alter the behavior of marine mammals and seabirds, changing the distribution of the animals or the amount of time that they spend feeding and/or resting. Several large whale species in the North Pacific are listed as endangered under the Endangered Species Act and depleted under the Marine Mammal Protection Act. Between 2001 and 2010, 44 whale strandings or deaths were reported in Central California, with 10 (about 23%) of these deaths from suspected or verified vessel strike. Protecting these species is a priority issue for the National Oceanic and Atmospheric Administration (NOAA).

SIGNIFICANT RESOURCES

This area of North-central California was selected and designated as the GFNMS because of significant concentrations of the following marine fauna and flora: seabirds and aquatic birds; marine mammals (pinnipeds and cetaceans); fish; marine flora (algae); benthic fauna; and estuarine environments.

The sanctuary has diverse biological communities in close proximity to one another. Habitats within the sanctuary include estuarine, pelagic (open ocean), benthic (sea floor), island, rocky intertidal, and sandy beach. The variety and size of habitats support a high diversity and abundance of species. The sanctuary's habitats are home to a number of species that are federally listed as endangered or threatened. The list includes highly recognized species such as blue and humpback whales, Marbled Murrelets, and Coho and Chinook salmon, as well as lesser-known species such as the tidewater goby and Short-tailed Albatross. Of particular concern to sanctuary management are wildlife disturbance impacts on seabirds, marine mammals, white sharks, and intertidal organisms.

Seabirds

The nesting seabird population is a significant wildlife resource of the sanctuary. The Farallon Islands support the largest concentrations of breeding seabirds in the contiguous United States. These birds forage in the Gulf of the Farallones, and are highly dependent on the productive waters of the sanctuary. Of the 164 species of birds known to occur in the sanctuary, 12 species of seabirds have breeding colonies on the Farallon Islands and feed in the sanctuary. These include Ashy and Leach's Storm Petrels; Brandt's, Pelagic, and Double-crested Cormorants; Western and California Gulls; Common Murres; Pigeon Guillemots; Cassin's Auklets; Rhinoceros Auklets; and Tufted Puffins. Other birds breeding on the Farallon Islands, include Black Oystercatchers, a shorebird, Rock Wren, Common Ravens, and Peregrin Falcons..

Coastal Birds

The sanctuary protects four estuaries, a lagoon, and one large coastal bay that provide foraging habitat for aquatic birds such as waterfowl, shorebirds, pelicans, loons, and grebes. These habitats are pristine compared to most coastal wetlands in California and provide important habitat for thousands of migrating and wintering birds. More than 160 species of birds use the sanctuary for shelter, food, or as a migration corridor. Of these, 54 species are known to use the sanctuary during their breeding season.

Marine Mammals

Thirty-six species of marine mammals have been observed in the sanctuary; six species of pinnipeds (seals and sea lions), twenty-eight species of cetaceans (whales, dolphins, and porpoises), and two species of otter (sea otter and river otter). Many of these animals occur in large concentrations and are dependent on the productive and secluded habitats for breeding, pupping, hauling-out, feeding, and resting during migration. The Farallon Islands provide habitat for breeding populations of five species of pinnipeds, and support the largest concentrations of California sea lions and northern elephant seals within the sanctuary.

Harbor seals breed on the Farallon Islands and on mainland rookeries. The Gulf of the Farallones region contains one-fifth of the California population of harbor seals, which was estimated at 30,000 in 2012. Prior to 1996, northern fur seals had not been known to breed on the Farallon Islands for over 170 years. Since then, the fur seal colony has grown to over 500 individuals, with over 200 pups born on the Farallon Islands every summer. From November to June, thousands of female and immature fur seals migrate through the western edge of the sanctuary along the continental shelf. Of all the marine mammals in the sanctuary, northern fur seals are the most sensitive to oil spills, because they depend largely on their fur for insulation.

Recently delisted from the status of threatened, Steller sea lions occur year-round in the sanctuary. This population has decreased dramatically in the southern part of its range, which includes the Farallon Islands. The decline has amounted to 20 percent of the total population over the past thirty years. The California sea lion is the most conspicuous and widely distributed pinniped in the sanctuary. It is found year-round in the sanctuary with the population increasing

at about 8 to 12 percent each year. The northern elephant seal is the largest pinniped species found in the sanctuary, with a total breeding population in the sanctuary of about 1,700.

Twelve cetacean species are seen regularly in the sanctuary, and, of these, the minke whale, harbor porpoise, Dall's porpoise, and Pacific white-sided dolphin are considered year-round residents. The harbor porpoise is the most abundant small cetacean in the Gulf of the Farallones, with approximately 9,000 porpoises in the central California region.

Gray whales migrate from Alaska southward through the sanctuary from December through February. The northward migration begins at the end of February and peaks in March. A few gray whales remain in the sanctuary during the summer. The sanctuary waters represent critical feeding habitat for endangered species such as blue and humpback whales, which forage here from April through November.

White Sharks

The Gulf of the Farallones region, and in particular the Farallon Islands, is considered to be an important aggregation area for adult and sub-adult white sharks. The waters around Guadalupe Island, which is offshore Baja, Mexico, are the only other location in the northeastern Pacific where adult white sharks are currently known to regularly congregate.

White sharks tend to arrive to the GFNMS management area during the summer months (although white sharks have been sighted year-round throughout the sanctuary) to the nearshore aggregation areas in the vicinity of large pinniped haul-out and breeding colonies between Año Nuevo in San Mateo County, the Farallon Islands, Tomales Point at the north end of the Point Reyes peninsula, and Bodega Headlands in Sonoma County (ONMS, 2010). Around the Farallones and Año Nuevo Island, white sharks primarily feed on pinnipeds (Ainley et al., 1981, Ainley et al., 1985). Near Point Reyes, they appear to be feeding mostly on harbor seals and California sea lions (Anderson et al., 2008).

Generally, white sharks leave the GFNMS management area, migrate into the open ocean during winter months, and tend to remain far offshore into the summer (Boustany et al., 2002; Weng et al., 2007; Jorgensen et al., 2010). It has been found that the sharks from both the north-central California region and from Guadalupe Island tend to regularly migrate to an open ocean region, located between Hawaii and North America and referred to as the "white shark café" or "shared offshore foraging area (SOFA)" (Domeier and Nasby-Lucas, 2008).

Little is known about the white shark's life cycle, particularly when and where they mate, where different populations give birth, and the duration of gestation.

JURISDICTIONAL SETTING

Wildlife disturbance or "harassment" within the sanctuary is governed by a multitude of federal and state laws including the National Marine Sanctuaries Act (NMSA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), Migratory Bird Treaty Act, Airborne

Hunting Act and the California Endangered Species Act. Site specific regulations for GFNMS address wildlife disturbance through prohibitions such as: disturbing seabirds or marine mammals by flying motorized aircraft at less than 1,000 feet (location specific); discharging or depositing (with exceptions); and altering the seabed (with exceptions); taking any marine mammal, marine reptile, or seabird; and attracting or approaching white sharks. There are also other state site-specific regulations such as California Special Closures that prohibit vessels from close approaches to specific seabird and marine mammal colonies.

The following is an overview of the relevant federal and state laws and regulations that may apply to wildlife disturbance. This is not a comprehensive review of all wildlife disturbance laws and regulations, and additional regulations could apply. The laws and regulations presented in this section are subject to change.

Federal Law

Endangered Species Act, 16 U.S.C. §§ 1531-1544

The ESA protects plant, fish and wildlife species (and their habitats) that are listed as endangered and threatened. Species are listed as endangered if found to be in danger of extinction throughout all or a significant portion of their ranges; species are listed as threatened if they are likely to become endangered within the foreseeable future. The ESA also protects designated critical habitat for listed species, which are areas of physical or biological features essential to the conservation of the species and which may require special management considerations. The ESA requires federal agencies to consult with USFWS and/or NMFS, as applicable, before initiating any action that may affect a listed species.

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801 et seq.

Under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the U.S. claimed sovereign rights and exclusive fishery management authority over all fish, and all Continental Shelf fishery resources, within the Exclusive Economic Zone (EEZ) (within 200 nm [230 miles; 370 km] of the shoreline). The MSA established a procedure for authorizing foreign fishing, and prohibited unauthorized foreign fishing within the EEZ.

The MSA also established national standards for fishery conservation and management within the EEZ, and created eight Regional Fishery Management Councils composed of state officials with fishery management responsibility, the regional administrators of NMFS, and individuals appointed by the Secretary of Commerce who are knowledgeable regarding the conservation and management, or the commercial or recreational harvest, of the fishery resources of the geographical area concerned. The Councils are responsible for preparing and amending fishery management plans for each fishery under their authority that requires conservation and management.

Fishery management plans (FMPs) describe the fisheries and contain necessary and appropriate conservation and management measures, applicable to foreign vessels in U.S. waters and fishing by U.S. vessels. The plans are submitted to the Secretary of Commerce, who has delegated to

Wildlife Disturbance Action Plan
GFNMS Draft Management Plan

NOAA approval of the plans. If approved, NMFS promulgates implementing regulations. NMFS may prepare Secretarial FMPs if the appropriate Council fails to develop such a plan.

(For more information on MSA, see Ecosystem Protection: Impacts from Fishing Activities Action Plan.)

Fish and Wildlife Coordination Act and Implementing Regulations, 16 U.S.C. §§ 661-666c

Any federal agency that proposes to control or modify any body of water must first consult with the USFWS or NMFS, as appropriate, and with the head of the appropriate state agency exercising administration over the wildlife resources of the affected state. The USACE has a memorandum of understanding with the USFWS to provide assistance in planning efforts.

Migratory Bird Treaty Act, 16 U.S.C. § 703 et. seq.

The MBTA is a federal statute that implements US treaties with several countries concerning the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 CFR 10.13. Further, the regulatory definition of a migratory bird is broad and includes any mutation or hybrid of a listed species, as well as any part, egg, or nest of such bird (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened under the ESA. The MBTA, which is enforced by the USFWS, makes it unlawful “by any means or manner, to pursue, hunt, take, capture [or] kill” any migratory bird except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale purchase, barter, or the offering of these activities, except as permitted by the implementing regulations.

Marine Mammal Protection Act, 16 U.S.C. §§ 1361-1421h

The MMPA protects and conserves marine mammal species by placing a moratorium on harassing, hunting, capturing, or killing any marine mammal or attempting any of these. If a project proponent determines that an action could incidentally harass (“take”) marine mammals, the proponent must consult with either the USFWS or NMFS to determine if a permit to take a marine mammal is required. A recent redefinition of “take” of an MMPA-protected species occurred under the FY 2004 Defense Authorization Act (House Bill 1588), where an animal is “taken” if it is harassed, and where harassment is defined as “(i) any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild or (ii) any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered” (section 315(f) P.L. 107–314; 16 U.S.C. § 703 note).

Coastal Zone Management Act, 16 U.S.C. §§ 1451-1466

The CZMA encourages states to preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources, such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. To encourage states

to participate, the CZMA makes federal financial assistance available to any coastal state or territory that is willing to develop and implement a comprehensive coastal management program. Federal agencies are required to carry out activities that affect any land or water use or natural resource of a state's coastal zone in a manner consistent with the enforceable policies of an approved state management plan.

State Laws and Regulations

California Endangered Species Act, California Fish and Game Code §§ 2050-2111.5

The CESA places the responsibility for maintaining a list of threatened and endangered species on the CDFW. The CDFW also maintains a list of candidate species that are under review for addition to either the list of endangered species or the list of threatened species. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any California-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may affect a candidate species.

Fish and Wildlife Protection and Conservation, California Fish and Game Code §§ 1600-1616

The state's authority in regulating activities in wetlands resides primarily with the CDFW and the SWRCB. The State of California regulates wetlands through the CDFW, which provides comment on USACE permit actions under the Fish and Wildlife Coordination Act. The CDFW may develop mitigation measures and require the preparation of a streambed alteration agreement if a proposed project would obstruct the flow or alter the bed, channel, or bank of a river or stream in which there are fish or wildlife resources, including intermittent and ephemeral streams.

The California legislature gave the Fish and Game Commission the authority to establish State Marine Reserves, State Marine Conservation Areas State Marine Parks, State Marine Recreational Management Areas, and Special Closures as a result of the California Marine Life Protection Act of 1999. The California Fish and Game Commission also has the authority to prohibit or restrict activities that may harm resources, including fishing, collecting, swimming, boating, and public entry. The CDFW also conducts oil spill response, damage assessment, and restoration through its Office of Spill Prevention and Response.

California Code of Regulations, Title 14 Division 1

The Fish and Game Commission has broad authority under Title 14 to establish regulations that afford protection to marine organisms and habitats. Of particular relevance to this DEIS is the eleven Existing Marine Protected Areas (MPAs) in the study area (Title 14, Section 632). MPAs in the study area have been in effect since May 1, 2010.

Wildlife Disturbance Action Plan

GFNMS Draft Management Plan

There are a total of nine State Marine Reserves in GFNMS region: Point Arena, Del Mar Landing, Stewarts Point, Gerstle Cove, Bodega Head, Point Reyes, Estero de Limantour, North Farallon Islands and Southeast Farallon Island. In a state marine reserve, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource, except under a scientific collecting permit or specific authorization from the California Fish and Game Commission for research, restoration, or monitoring purposes.

There are eleven state marine conservation areas in GFNMS: Point Arena, Sea Lion Cove, Saunders Reef, Stewarts Point, Salt Point, Russian River, Bodega Head, Drakes Estero, Point Reyes, Duxbury Reef and Southeast Farallon Island. In a state marine conservation area, it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for commercial or recreational purposes, or a combination of commercial and recreational purposes except as specified. The California Fish and Wildlife Commission may issue scientific collecting permits or specifically authorize research, education, and recreational activities, and certain commercial and recreational harvest of marine resources, provided that these uses do not compromise protection of the species of interest, natural community, habitat, or geological features.

There are three State Marine Recreational Management Areas: the Russian River, Estero Americano and Estero de San Antonio. In a state marine recreational management area, it is unlawful to perform any activity that would compromise the recreational values for which the area may be designated. Recreational opportunities may be protected, enhanced, or restricted, while preserving basic resource values of the area. No other use is restricted unless specified.

California Marine Invasive Species Act, Cal. Pub. Res. Code § 71200 et seq.

(See Introduced Species Action Plan)

California Code of Regulations, Title 2, Division 3, Chapter 1, Article 4.6

Article 4.6 was designed to move the state toward elimination of the discharge of nonindigenous species into the waters of the state or into waters that may impact the waters of the state, based on the best available technology economically achievable. The provisions of Article 4.6 apply to all vessels arriving at a California port or place from another port or place within the Pacific Coast Region. All such vessels shall (1) exchange ballast water in near-coastal waters (more than 50 nm from land and in water at least 200 meters [656 feet, 109 fathoms] deep) before entering the waters of the State if that ballast water was taken on in a port or place within the Pacific Coast Region, (2) retain all ballast water on board, (3) discharge the ballast water to a reception facility approved by the California State Lands Commission (CSLC) or (4) use an alternative, environmentally sound method of ballast water management that has been approved by the CSLC or the USCG.

California Species of Special Concern (CSC): It is the goal and responsibility of the CDFW to maintain viable populations of all native species. The department has designated certain vertebrate species as “species of special concern” because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of

designating species as CSC is to halt or reverse their decline by calling attention to these threats and addressing the issues of concern early enough to secure the species' long-term viability.

California Fully Protected Species: Fully protected species may not be taken or possessed without a permit from the California Department of Fish and Wildlife and/or the CDFW.

WILDLIFE DISTURBANCE GOAL

1. Reduce or eliminate impacts on sanctuary marine wildlife and their habitats by encouraging responsible human behavior.

WILDLIFE DISTURBANCE OBJECTIVES

1. Continually evaluate levels and sources of impacts on wildlife and habitats.
2. Address human behavior that is impacting wildlife and habitats.

WILDLIFE DISTURBANCE ACTION PLAN

STRATEGY WD-1: *Create easily accessible centralized Web-based spatial database to house information pertaining to wildlife disturbance.*

STRATEGY WD-2: *Through the use of volunteer monitoring programs, observe and record impacts from human activities on marine wildlife and key habitats of the sanctuary.*

Activity 2.1 Develop volunteer-based intertidal monitoring program to evaluate human impacts on the intertidal habitat of the sanctuary and measure recovery rates of closed areas. This program will fall under a coordinated and complementary set of volunteer outreach and monitoring programs.

Activity 2.2 Develop volunteer-based coastal and offshore monitoring program to report location and numbers of whales in risk of possible ship strikes. This program will fall under a coordinated and complementary set of volunteer outreach and monitoring programs.

- A. The volunteer-based coastal and offshore whale monitoring program will be implemented through the development of a mobile device application technology to allow stakeholders and the general public to report whale observations to NOAA in near real-time. These observations may be incorporated with a suite of data sets on whale sightings, abundance and distribution, to assist management when establishing potential whale advisory zones or dynamic management areas to better protect whales from ship strike by commercial vessels.

STRATEGY WD-3: *Coordinate with other agencies, institutions and programs to better understand and address anthropogenic noise, light, visual and physical impacts on wildlife from vessels and low flying aircraft.*

Activity 3.1 In coordination with partners, identify types and frequency of impacts on wildlife from motorized and non-motorized aircraft and vessels both inside and outside restriction zones. Close approaches by vessels and low flying aircraft are known to create behavioral changes in wildlife including flushing, stampeding, and abandonment. Information from monitoring programs will help to identify key geographical areas with high disturbance frequency to be targeted for needed outreach and enforcement. Of particular concern are seabird colonies at Point Reyes Headlands, Bolinas Lagoon, Farallon Islands, Bird Rock, and Bodega Rock, Russian River Colony Complex, Fish Rocks, and Gualala Point Island and white sharks around Southeast Farallon Island.

Activity 3.2 In coordination with partners, create a regional monitoring program to better protect whales from commercial vessels in and around the shipping lanes at the entrance to San Francisco Bay. Endangered blue, fin and humpback whales feed within sanctuary waters. Large commercial vessels utilize an internationally approved traffic separation scheme (TSS) when they transit through sanctuaries, heading to and from ports in San Francisco Bay and other major ports in the Pacific Rim. The co-occurrence of these two global populations (whales and ships) in space and time creates an elevated risk of vessel strike, and thus mortality, to whales. High densities of vessel traffic also expose marine mammals to chronic underwater engine and propeller noise. Exposure to this underwater noise can impact the ability of whales to communicate with each other, navigate and forage.

- A. Increase and strengthen partnerships with regional research institutions and management agencies whose programs focus on gathering accurate whale observations, and expedite interpretation of data findings which can be used to support management decisions (i.e. the creation of whale advisory zones, dynamic or seasonal management areas) to reduce the risk to whales in sanctuary waters.
- B. Augment current shoreline and offshore sanctuary monitoring programs that gather data on baleen whale sightings, behavior, age abundance and distribution, so that findings can be rapidly interpreted to support management decisions to reduce the risk of ship strikes to whales in the sanctuary.
- C. Develop data management, interpretation and dissemination protocols to gather, review interpret data from various levels of expertise, e.g. data gathered by the general public, trained naturalists, and marine mammal scientists. Management of data gathered and interpreted from various data sets, e.g. data collected through the mobile application, data gathered from scientists on the Farallon Islands, through sanctuary monitoring programs, and data collected from CDFW and NMFS aerial surveys.
- D. Convene workshop of West Coast marine mammal scientists and managers to recommend criteria for whale advisories and implementation of management measures.

- E. Assess compliance of advisories or regulations to reduce vessel speed and use of dynamic management areas and determine the need for regulatory actions.
- F. The sanctuary and its partners will seek to secure funding to support these programs. Potential funding sources include the Pacific Merchant Shipping Association (PMSA), Chamber of Shipping of America (CSA), private foundations, and others.

Activity 3.3 GFNMS will take an active role in reviewing project proposals that have the potential to introduce harmful levels of sound into the sanctuary environment and will work with project proponents to mitigate impacts and protect sanctuary resources. Impacts on marine resources from noise are of increasing concern with over 6,000 container ships and bulk product carriers passing through the sanctuary on an annual basis; the use of seismic surveys for oil and gas exploration; identification of earthquake faults and activities; and the use of side scan sonar for research. Sound travels approximately five times faster in water than in air, with low frequency sounds traveling the farthest. Low frequency sounds (below 1,000 Hz) are generated by many human activities. Communication by many marine mammals and fish also falls within this range of frequency. Individually and cumulatively, the sound produced by these activities may have significant impacts on the living marine resources of the sanctuary. GFNMS would like to have a better understanding of the long-term and cumulative impacts on marine mammals, fishes and invertebrates.

Activity 3.4 Through the use of permit conditions, reporting requirements, workshops, and/or tracking systems, the sanctuary will identify wildlife disturbance-related research and monitoring programs taking place in the sanctuary and collaborate with these researchers to collect data on wildlife disturbance in the sanctuary.

- A. Coordinate with research partners at CBNMS, Point Blue Conservation Science and PRNS to document, while in the field, wildlife disturbance from vessels and low flying aircraft.
- B. Through SIMoN, identify institutions, principal investigators and actual location of data collection efforts taking place in the sanctuary.
- C. Inform researchers about responsible wildlife interactions, seasonal restrictions, and GFNMS' and other agency regulations.
- D. Use SIMoN to identify potential partnerships and opportunities to collect data on wildlife disturbance.
- E. Develop standardized data reporting system, including standardized protocols, for researchers to record wildlife disturbance observations and combine with data from monitoring programs (see also Activity WD-3.1C).

- F. As appropriate, request data sets from researchers to include in SIMoN for use by natural resource managers in addressing wildlife disturbance issues, to be submitted through an on-line reporting system.

Activity 3.5 Evaluate emerging scientific studies delineating the impacts of anthropogenic noise, light and visual and physical disturbance including vessel traffic, seismic surveys for hydrocarbon exploration and other industrial and governmental activities impacting sanctuary resources.

- A. Conduct a literature search, including grey literature, and develop an annotated bibliography.
- B. Coordinate with research partners to document anthropogenic noise, light and visual and physical disturbance in the Sanctuary.

STRATEGY WD-4: *Through interpretive enforcement and law enforcement efforts, address human behavior that may adversely impact wildlife.*

Activity 4.1 Using existing volunteer outreach and monitoring programs, develop a coordinated and complementary set of interpretive enforcement efforts to address human behavior and its impacts on sanctuary wildlife. Interpretive enforcement is intended to be a proactive and a preventative method to avert potential negative impacts from human behavior before they occur.

- A. Create a new interpretive enforcement program to address impacts from human trampling and harvesting on rocky intertidal habitats. Based on Fitzgerald Marine Reserve's (FMR) Roving Intertidal Docent Program, a similar volunteer-based program will be expanded to address trampling and harvesting on sensitive and high traffic areas such as Salt Point, Sea Ranch, Duxbury Reef and Pillar Point beach in MBNMS.
- B. Develop and distribute wildlife viewing guidelines (posters, informational cards, brochures) to target audiences including: kayakers; whale watching boats (based on Watchable Wildlife and Hawaiian Islands Humpback Whale National Marine Sanctuary [HIHWNMS] guidelines); and private boaters (including recreational and commercial boats).
- C. Develop interpretive enforcement/outreach program targeting pilot organizations, flight schools, flight clubs, aviation publications and airports.

Activity 4.2 Develop a coordinated and cooperative Protected Resource Enforcement Plan to ensure sufficient patrol presence in the sanctuary.

- A. Through the development of partnerships and interagency cooperation, assess the potential to create a cross-deputization program with the CDFW, U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA) Fisheries, and the National Park Service (NPS).

- B. Train enforcement officers in interpretive enforcement and sanctuary regulations.
- C. Maintain an active enforcement relationship with the United States Coast Guard (USCG), the United States Coast Guard Air Patrol Auxiliary and the Civil Air Patrol (CAP).
- D. Hire a dedicated sanctuary enforcement officer.
- E. Investigate the potential for training volunteer uniformed interpretive enforcement officers.

STRATEGY WD-5: *Develop wildlife viewing guidelines to reduce disturbance to wildlife from human interactions.*

Activity 5.1 Conduct an assessment of target audiences to determine appropriate messaging, products and avenues for communicating to wildlife viewers about responsible interactions with wildlife. Wildlife viewing guidelines will be developed in concert with NOAA's *Responsibly Watching California Marine Life* handbook and the National Ocean Etiquette program. The Ocean Etiquette program is a partnership between NOAA, other federal and state agencies, and non-profit organizations. This program is directed at the public and commercial operators to educate them about safe and responsible wildlife viewing, pertaining specifically to marine species and habitats. Other wildlife viewing models to be considered include: Paddler's Etiquette, The Marine Mammal Center's Stranded Mammal Etiquette and Marine Mammal Viewing Guidelines, and Audubon's Standards for Bird Viewing.

- A. Develop viewing guidelines and outreach materials for boaters based on species-specific behavioral responses and vessel approach and speed guidelines (to be consistent with whale watching guidelines and the National Ocean Etiquette Program).
 - 1. Develop volunteer program based on *Dockwalkers* model to reach boaters at harbors and marinas.
 - 2. Develop kiosk at key harbors to display wildlife viewing guidelines and animal identification cards.
 - 3. Reach boaters through vessel registration with Department of Motor Vehicles and through harbors and marinas.
- B. Develop wildlife watching guidelines based on the National Etiquette program and Hawaiian Islands Humpback Whale National Marine Sanctuary's guidelines for commercial operators.
 - 1. Hold workshops for wildlife watching operators.
 - 2. Develop responsible wildlife viewing certification program for wildlife watching boats.
- C. Continue and expand distribution of Paddler's Etiquette and develop complementary outreach tools such as signage and animal identification cards.
 - 1. Hold workshops for kayak vendors.

Wildlife Disturbance Action Plan
GFNMS Draft Management Plan

- D. In coordination with the Ocean Etiquette program, develop wildlife viewing and interaction guidelines for shoreline observers addressing shorebirds, marine mammal strandings, and trampling and harvesting in the rocky intertidal zone.
- E. Develop guidelines for wildlife interactions for researchers conducting research in the sanctuary.
 - 1. Include outreach materials in research permit package.
 - 2. Distribute outreach materials to other agencies and institutions conducting research in the sanctuary that does not require a permit.
 - 3. Review permit conditions for consistency with wildlife viewing guidelines.

STRATEGY WD-6: Maximize media venues to augment directed outreach efforts and increase public awareness of wildlife disturbance issues.

Activity 6.1 In conjunction with partners, develop a media communications plan to address wildlife disturbance issues.

- A. Identify target audiences.
- B. Work with partners on joint media messaging.
- C. Develop boilerplate messaging format for planned media communications and to be prepared for unplanned/emergency events (reactive) media coverage.
- D. Develop wildlife disturbance media kit.
- E. Identify opportunities for cooperative marketing efforts with other agencies and organizations.

STRATEGY WD-7: Coordinate the Seabird Protection Network aimed at improving the survival and recruitment of seabird colonies by reducing and eliminating human disturbances at seabird breeding and roosting sites throughout California.

Activity 7.1 In coordination with partners, provide appropriate education and outreach to government agencies and ocean and coastal users on the macro level by targeting organized events, association meetings, conferences, air and boat shows and ecotourism vendors; and on the micro level with individuals including pilots, researchers, rangers, sea kayakers, coastal recreational users, commercial and recreational fishermen, whale watchers and students. Breeding and roosting seabird populations are significant wildlife resources of the California coast and the protection of seabird populations and habitats were a critical consideration in the sanctuary's designation.

- A. Use colony monitoring and surveillance data to identify key audiences and venues.
- B. When necessary, establish working groups to advise the Seabird Protection Network on any one of its primary project components (Education, Coordinated Management and Enforcement, and Monitoring).

STRATEGY WD-8: Coordinate the White Shark Stewardship Program to protect and conserve the white shark population that utilizes the sanctuary.

Activity 8.1 Through the use of permit conditions, reporting requirements, naturalist trainings and workshops, various monitoring programs, and community outreach the sanctuary will identify potential disturbances to white sharks and work with partner agencies, researchers, and the community to minimize these disturbances, including:

- A. Review current statutes, authorities, regulations and agency jurisdictions pertaining to managing and protecting white sharks, determine what regulations need better enforcement and what geographic areas are subject to regulations, and whether or not additional or amended regulations are required.
- B. Require naturalist trainings for white shark tour operators and conduct public and boater outreach efforts to foster stewardship of the local population of white sharks and enhance compliance with sanctuary regulations.
- C. Evaluate emerging scientific information on potential impacts of anthropogenic activities on white sharks (such as using attractants) by conducting literature reviews and coordinating with other resource management agencies and the scientific community in order to better evaluate management decisions within the sanctuary.
- D. Maintain long-term monitoring to document disturbance and/or effectiveness of regulatory action and enforcement program.
- E. Work with enforcement agencies on the federal, state and local level to encourage active enforcement of laws and regulations that protect white sharks, and to promote a coordinated law enforcement effort.
- F. Develop national and international partnerships and agreements with other regions that have significant white shark populations to better understand potential disturbances and management concerns.

Potential Partners:

Federal: NOAA Coastal Services Center, Office of National Marine Sanctuaries (ONMS), Golden Gate National Recreation Area (GGNRA), Point Reyes National Seashore (PRNS), United States Fish and Wildlife Service (USFWS), US Coast Guard, Monterey Bay National Marine Sanctuary (MBNMS), Cordell Bank National Marine Sanctuary (CBNMS), National

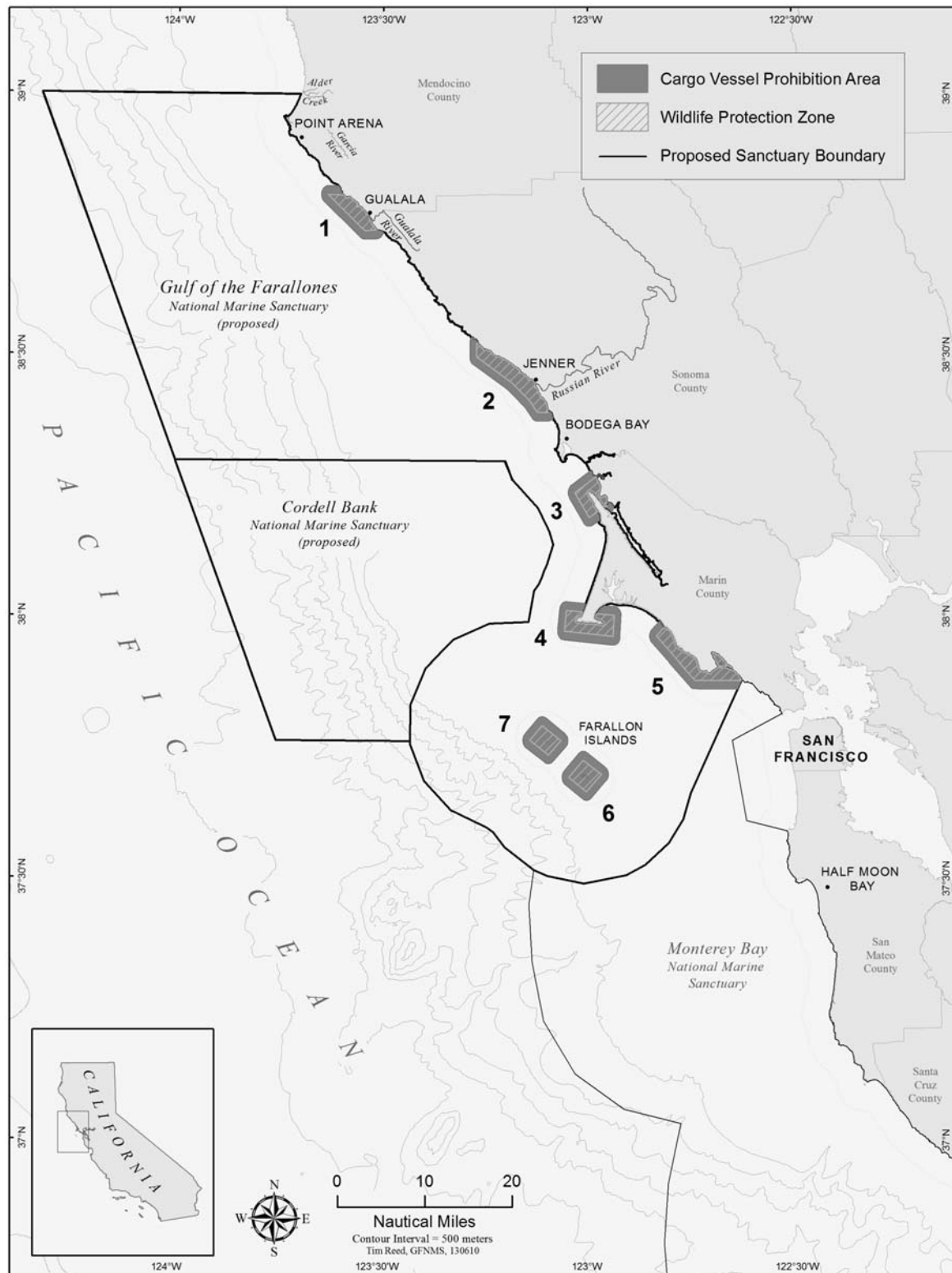
Wildlife Disturbance Action Plan
GFNMS Draft Management Plan

Marine Fisheries Service, NOAA Office of Law Enforcement, Federal Aviation Administration, Bureau of Land Management,

State & County: CA Dept. of Fish and Wildlife, Fitzgerald Marine Reserve (FMR), Bodega Marine Laboratory (BML), CA State Parks, California Department of Boating and Waterways (CDBW),

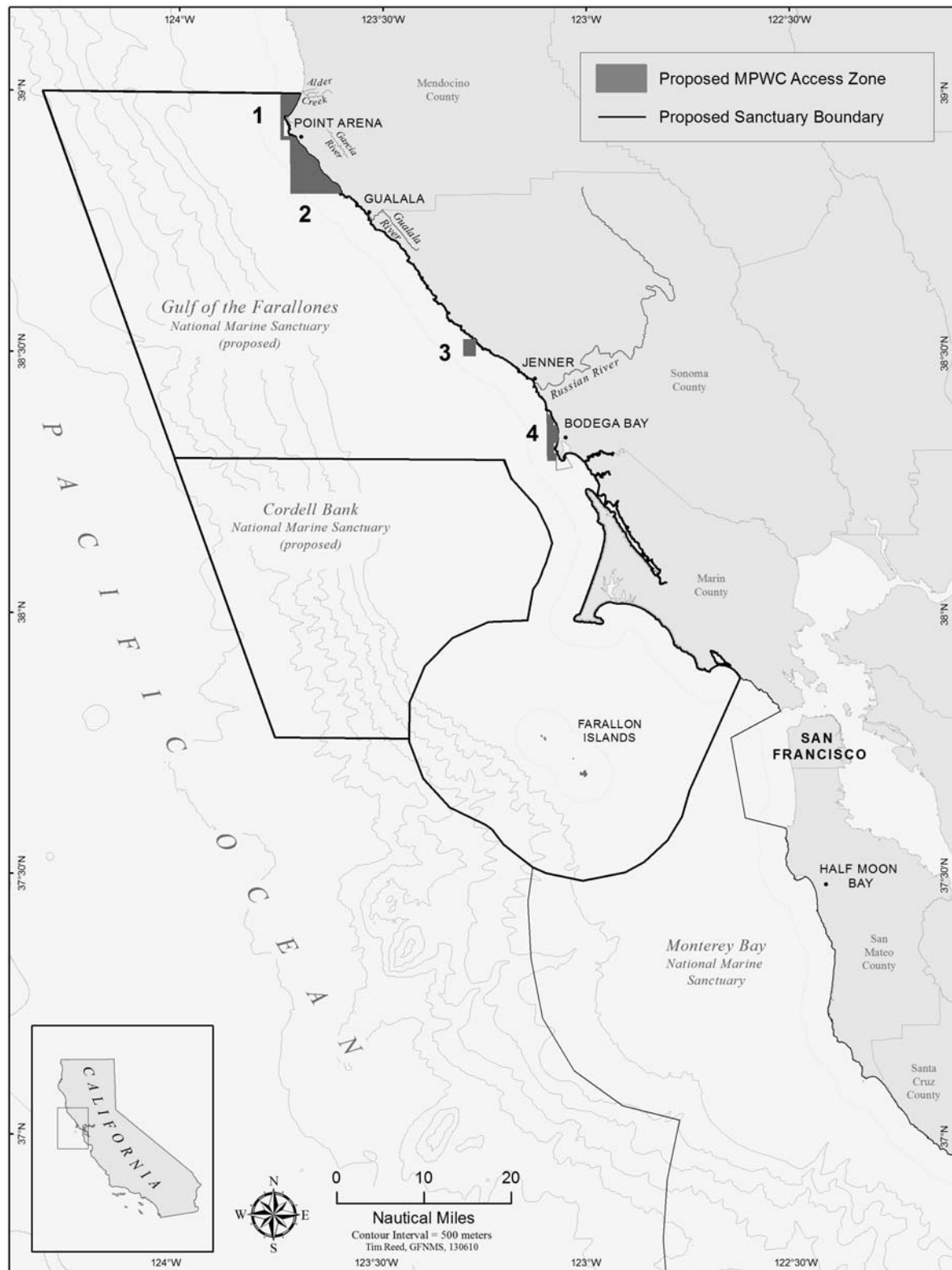
Other: Farallones Marine Sanctuary Association (FMSA), Earth NC/Conserve IO, Pacific Merchant Shipping Association (PMSA), Chamber of Shipping of America (CSA), Point Blue Conservation Science, The Marine Mammal Center (TMMC), Harbor Patrol, Coast Guard Auxiliary, San Francisco (SF) Ad Council, Coast Guard Auxiliary, Stewards of the Coast and Redwoods, Sea Ranch Task Force, and the Reserva de la Biosfera Isla Guadalupe.

Proposed Wildlife Protection Zone Map



Proposed Motorized Personal Watercraft Access Zone Map
GFNMS Draft Management Plan

Proposed Motorized Personal Watercraft (MPWC) Access Zone Map



GFNMS WILDLIFE DISTURBANCE

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY WD-2: Through the use of volunteer monitoring programs, observe and record impacts from human activities on marine resources and key habitats such as the rocky intertidal.	Lessen or eliminate, and remedy impacts on the living marine resources of the sanctuary and their habitats by encouraging responsible human behavior.	Continually evaluate levels and sources of impacts on wildlife and habitats.	1) Increase sanctuary management and the public's understanding of the effects of human disturbance on key habitats and recovery rates. 2) Increase recovery of trampled intertidal habitat.	1) Complete design and implementation of volunteer monitoring program to evaluate impacts and recovery rates. 2) Use results of monitoring program to manage human impacts on rocky intertidal habitats in the sanctuary.	Research Coordinator, Education Coordinator, Ecosystem Protection Coordinator	Report on intertidal monitoring program findings
STRATEGY WD-4: Through the use of interpretive and law enforcement efforts, address human behavior that may be adversely impacting wildlife. STRATEGY WD-5: Develop wildlife viewing guidelines to reduce disturbance to wildlife from human interactions. STRATEGY WD-6: Maximize venues to augment directed outreach efforts and increase public awareness of wildlife disturbance issues.	Lessen or eliminate, and remedy impacts on the living marine resources of the sanctuary and their habitats by encouraging responsible human behavior.	Address human behavior that is impacting wildlife and habitats.	1) Increase awareness and change behavior of humans to lessen impacts while interacting with wildlife. 2) Reduce the number of disturbances to wildlife.	Monitor human interactions with wildlife to determine effectiveness of outreach and enforcement in affecting behavior.	Ecosystem Protection Coordinator, Education Coordinator	1) Technical data summaries 2) Fine-scaled seasonal distribution maps 3) Annual report of observed wildlife disturbances and sources of disturbance



INTRODUCED SPECIES ACTION PLAN

ISSUE STATEMENT

Introduced species have been identified in and around Gulf of the Farallones National Marine Sanctuary (GFNMS) waters and have the potential to cause ecological and economic degradation to the affected coastal areas. If detection, prevention, and eradication efforts are not taken, further introduction and spread of introduced species will continue in and adjacent to the sanctuary and potentially impact sanctuary wildlife and habitats. Current levels, in terms of abundance and diversity of introduced species are not well documented; nor are the impacts, existing or potential, well understood.

ISSUE DESCRIPTION

In the context of GFNMS, introduced species in the marine/estuarine environment are defined as (1) a species (including any of its biological material capable of propagation) that is non-native to the ecosystem(s) protected by the sanctuary; or (2) any organisms into which genetic matter from another species has been transferred in order that the host organism acquires the genetic traits of the transferred genes. GFNMS is close to San Francisco Bay, which is considered the most invaded aquatic ecosystem in the world, with over 255 introduced species. Indications are that introduced species are the greatest threats to rare, threatened, or endangered species in this country, thought to be second only to habitat destruction. In general, introduced species in the marine/estuarine environment alter species composition; threaten the abundance and/or diversity of native marine species; interfere with the ecosystem's function; and disrupt commercial and recreational activities. Although several introduced species have been identified in the bays and estuaries throughout the range of GFNMS, a complete inventory is currently underway and has not been completed.

Nearshore discharge of ballast water is a common source of introduced species. Many organisms carried in ballast water are in the larval or diapause stage of their life cycle. Once discharged, estuaries and harbors provide optimal environments for the growth of these organisms. Viruses, bacteria, and other pathogens have also been identified in ballast water. With over 45,000 commercial cargo ships (4,000 vessels entering or exiting San Francisco Bay per year) transporting 10 billion tons of ballast water around the globe every year, the rate of introduced species will be certain to grow if efforts to prevent introductions do not occur.

Introduced species may also be transported on commercial and recreational vessel hulls, rudders, propellers, intake screens, ballast pumps, and sea chests. Other vectors for the spreading of

introduced species include recreational and research equipment, debris, dredging and drilling equipment, dry docks, and buoys. Organisms transported or used for research, restoration, educational activities, aquarium activities, live bait, aquaculture, biological control, live seafood, and rehabilitated and released organisms also have the potential for accidental or intentional release into the marine/estuarine environment. Of additional concern are genetically modified species that either escape or are released into nearshore or open ocean environments.

JURISDICTIONAL SETTING

The following is an overview of the relevant federal and state laws and regulations that may apply to introduced species. This is not a comprehensive review of all laws and regulations related to introduced species, and additional regulations could apply. The laws and regulations presented in this section are subject to change.

International Law

Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens Resolution A.868(20)–Nov. 20, 1997

These guidelines were developed by the International Maritime Organization (IMO), and outline the techniques for minimizing introductions from cargo ship ballast discharge.

International Council for Exploration of the Sea (ICES) Code of Practice Concerning Introductions and Transfers of Marine Species

A regulatory framework for member states to use in managing the introduction of non-native species. This Code of Practice is continually modified to incorporate new scientific knowledge.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES was developed by the United Nations and signed by the U.S. in 1975. It is designed to restrict trade in listed species to protect depletion in the habitat of origin.

International Plant Protection Convention (IPPC)

IPPC was developed by the United Nations and signed by the U.S. in 1972 with 94 other countries. It is designed to prevent the introduction and spread of agricultural pests.

Federal Law

Executive Order 13112, February 1999

This Executive order directs federal agencies to prevent the introduction of invasive species and provide for their control; establishes the Invasive Species Council and directs them to write an invasive species management plan within eighteen months.

National Invasive Species Act, P. Law 104-332

NISA requires open water exchange (OWE) of ballast water and mandatory ballast management plans and reporting. It also required the development of voluntary ballast management guidelines for all ships entering US waters. The law also requires all vessels that enter US territorial waters (with certain exemptions) to manage ballast water according to prescribed measures. NISA also required the US Coast Guard (USCG) to evaluate the effectiveness of the voluntary ballast management program three years after implementation. In 2004, voluntary guidelines were determined to be ineffective, and thus USCG initiated mandatory ballast management for all ships entering U.S. waters from outside the Exclusive Economic Zone (EEZ) of the United States.

At the federal level, both the USCG and the EPA regulate ballast water discharges. Both agencies currently require ballast water exchange for the majority of vessels operating in U.S. waters. However, the USCG issued a final rule in 2012 establishing performance standards for ballast water discharges that will be implemented during the remainder of this decade. These performance standards are currently aligned with the IMO standards contained within the BWM Convention and include a standard that operators must avoid exchanging ballast water within a National Marine Sanctuary. The EPA regulates ballast water under the Vessel General Permit for Discharges Incidental to the Normal Operation of Vessels (VGP), through authority contained within the Clean Water Act.

At the U.S. state level, several states have used their authority under the Clean Water Act to add additional requirements into the VGP when vessels operate in their state waters, however California has been granted the authority by their state legislature to regulate ballast water independent of the Clean Water Act. The California regulations provide additional protections against the introduction of introduced species through the release of ballast water throughout GFNMS waters.

Title 50, U.S. Code of Federal Regulations; 58976-58981, 1993

This law is enforced by U.S. Fish and Wildlife Service, Dept. of Interior, prohibiting importation of specific disease agents of salmonid fish.

Federal Noxious Weed Act of 1974 (amended 1990), Federal Plant Pest Act (1957) and Plant Quarantine Act (1912)

These Acts give the U.S. Dept. of Agriculture the authority to regulate the movement of plants, plant products, plant pests, and their vectors. Also regulates the introduction of genetically engineered organisms.

State Law

California Marine Invasive Species Act, Cal. Pub., Res. Code § 71200 et seq.

The California Marine Invasive Species Act of 2003 applies to all vessels, United States and foreign, carrying, or capable of carrying, ballast water into the coastal waters of the state after operating outside of the coastal waters of the state, except vessel of the armed forces or a foreign vessel merely traversing the territorial sea of the United States and not entering or departing a United States port, or not navigating the internal waters of the United States, and that does not discharge ballast water into the waters of the state, or into waters that may impact waters of the state. It requires mid-ocean exchange or retention of ballast water for vessels coming from outside the EEZ and requires vessels coming from other west coast ports to minimize ballast water discharge. Record-keeping and other compliance measures apply to all vessels entering California waters.

California Code of Regulations, Title 2, Division 3, Chapter 1, Article 4.6

Article 4.6 was designed to move the state toward elimination of the discharge of nonindigenous species into the waters of the state or into waters that may impact the waters of the state, based on the best available technology economically achievable. The provisions of Article 4.6 apply to all vessels arriving at a California port or place from another port or place within the Pacific Coast Region. All such vessels shall (1) exchange ballast water in near-coastal waters (more than 50 nm from land and in water at least 200 meters [656 feet, 109 fathoms] deep) before entering the waters of the State if that ballast water was taken on in a port or place within the Pacific Coast Region, (2) retain all ballast water on board, (3) discharge the ballast water to a reception facility approved by the California State Lands Commission (CSLC) or (4) use an alternative, environmentally sound method of ballast water management that has been approved by the CSLC or the USCG.

Hundreds of federal programs, state organizations, international organizations and non-profit organizations have established databases, community outreach, monitoring, eradication, research and education programs. Additionally, industry is working on a number of physical, biological and chemical means of treating or controlling organisms in ballast water.

INTRODUCED SPECIES GOALS

Maintain an abundance and diversity of native marine/estuarine species:

1. Prevent future introductions of introduced species in the sanctuary.
2. Detect, manage, and where feasible, eradicate new and established introduced species in the sanctuary.

INTRODUCED SPECIES OBJECTIVES

1. Understand the current extent of introduced species in GFNMS.
2. Create a new program and/or coordinate with existing programs to detect and monitor new introductions.
3. Develop management actions to eradicate and/or control existing and new introductions.
4. Identify and control current and potential pathways to prevent new introductions.

INTRODUCED SPECIES ACTION PLAN

STRATEGY IS-1: *Develop a native and introduced species inventory and database specifically for GFNMS and areas adjacent to the sanctuary.*

Activity 1.1 Although efforts are being made by California Department of Fish and Wildlife (CDFW), Smithsonian, and others to create a centralized database, there has been no effort to profile and maintain a database specifically on the extent of introduced species in and adjacent to GFNMS. In order to understand the current extent of introduced species in the sanctuary, the following steps will be taken:

- A. As a component of STRATEGY FA-1, update current species list and integrate introduced species into this list. Perform a species abundance and distribution assessment, and an all-taxa inventory (species inventory) through a meta-analysis (identifying existing literature, specimens, and data).
- B. Perform an introduced species inventory literature search (mostly grey literature) and develop an annotated bibliography. Where possible, collect documents and catalog in library.
- C. Identify data gaps for native and introduced species (areas surveyed) inventories, particularly focusing on the outer coast. Address data gaps by working with researchers and partner organizations.

Activity 1.2 Develop an easily accessible and queriable database to be used by sanctuary superintendent, staff, researchers and other agencies and institutions.

- A. Create a centralized Web-based spatial database on SIMoN or as a PDF portfolio for mapping species abundance and distribution and spatial extent of introduced species, focusing on areas of concern such as Estero Americano and Estero de San Antonio. Database will identify potential areas of highest likelihood of invasion.
- B. Ensure compatible database protocols by investigating existing database structures.

STRATEGY IS-2: *In coordination with existing monitoring programs, develop a program to detect introduced species in estuarine environments of the sanctuary.*

Activity 2.1 Currently, there are no formal introduced species monitoring programs for estuaries in the sanctuary (Bolas Lagoon, Tomales Bay, Estero de San Antonio, and Estero Americano). Monitoring efforts are taking place in estuarine environments in and around the sanctuary, such as PRNS's all-taxa inventory of Tomales Bay, although not specifically focused on introduced species. GFNMS will work with other agencies and institutions to incorporate introduced species identification and monitoring into existing monitoring programs. Ensuring continuous monitoring in coordination with other agencies will include the following steps:

- A. Formalize partnerships with agencies/institutions currently conducting monitoring programs in Tomales Bay and Bolas Lagoon.
- B. Develop an introduced species monitoring program for Estero Americano and Estero de San Antonio (in conjunction with other sanctuary monitoring programs, such as water quality, to be developed).
- C. Adopt standardized protocols from Smithsonian Environmental Research Center (SERC).
- D. Consult with the sanctuary Introduced Species Technical Advisory Council (see STRATEGY IS-6) for advice on frequency of monitoring. Also, conduct random characterization on rotational basis.
- E. Feed data into sanctuary's centralized database (STRATEGY WD-1), as well as other regional and national databases.

Activity 2.2 Develop guidelines for new estuarine monitoring programs for introduced species, such as:

- A. Target known invasives, new invasives, and those with likelihood of being established.
- B. Conduct an annual survey of representative areas, high profile areas (high visibility), and conservation areas.
- C. Track other areas in the region to identify potential future introduced species.
- D. Understand the life history and tolerances of already introduced species in the region.

STRATEGY IS-3: *Develop a monitoring program to detect and monitor introduced species in the rocky intertidal areas of the sanctuary.*

Activity 3.1 Ongoing since 1992 (with the exception of two years), the GFNMS' rocky intertidal monitoring program's goals are to: (1) monitor trends in population dynamics of selected indicator organisms; (2) determine normal levels of variation; (3) discover abnormal conditions; and (4) measure the effects of management actions. Data indicate changes from natural events

such as El Nino on the study species, the varied distribution of species, and the influences that habitat has on the abundance of species. The study includes island and mainland sites. GFNMS' rocky intertidal monitoring program can be modified to identify and track introduced species as follows:

- A. Identify additional representative coastal sites to be monitored for introduced species.
- B. Adopt standardized protocols from SERC and Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) for monitoring introduced species.
- C. Consult with sanctuary Introduced Species Technical Advisory Council for advice on frequency of monitoring. Also, conduct random characterization on rotational basis.
- D. Feed data into the sanctuary's centralized database (see Strategy WD-1), as well as other regional and national databases.

Activity 3.2 In adding onto GFNMS' existing intertidal monitoring program to look for introduced species, and in coordinating with other agencies' rocky intertidal monitoring programs, the following steps will be taken:

- A. Target known invasives, new invasives, and those with the likelihood of being established.
- B. Conduct an annual survey of representative areas, high profile areas, and conservation areas.
- C. Track other areas in the region to see what is being introduced, and what to start watching for possible new introductions into the sanctuary.
- D. Understand the life history and tolerances of already introduced species in the region.
- E. Identify the top ten introduced species the sanctuary would like other intertidal monitoring programs to target.
- F. Coordinate with other agencies on protocols.

STRATEGY IS-4: *Develop a monitoring program to detect and monitor introduced species in the pelagic environment of the sanctuary.*

Activity 4.1 Introduced plankton species entering San Francisco Bay (and potentially adjacent areas) may already be present in the open ocean (presumably, primarily from ballast water). Although this does not necessarily mean that plankton present in the open water will establish itself in the bay (as some species are benthic while others pelagic), it may provide an indication of the presence of an introduced species. One component of the GFNMS' Sanctuary Ecosystem Assessment Surveys (SEA Surveys) is to assess biological productivity (chlorophyll-a;

Introduced Species Action Plan
GFNMS Draft Management Plan

phytoplankton species inventory; euphausiid abundance and distribution; distribution/ abundance of jellyfish; assessment of drift algae). Without any additional effort by the sanctuary, SEA's plankton tows and Harmful Algal Bloom assessments will be used to sample for introduced species.

- A. Since plankton samples are already being collected, detection of introduced species would not require modifications to the sampling protocol, but would require additional analysis to identify introduced species within the sample. GFNMS will coordinate with San Francisco State University's (SFSU) Romberg Tiburon lab to analyze plankton samples and identify introduced species.

STRATEGY IS-5: Develop an outreach and monitoring program to improve early detection of introduced species.

Activity 5.1 Since most introduced species are accidental finds, GFNMS will develop an early detection program to widely disseminate information about introduced species to local citizens and visitors who frequent areas of the sanctuary where invaders could become established. Using Elkhorn Slough National Estuarine Research Reserve's (ESNERR) *Least Wanted Aquatic Invaders Programs* model, the sanctuary will partner with other agencies to develop a similar program. Steps to develop this program include:

- A. Identify other agencies with which to develop a cooperative partnership.
- B. Identify two dozen "least wanted" invaders. These are species that are not yet present in GFNMS, but have successfully invaded other coastal regions; are colonizing and increasing in abundance; and are spreading rapidly. Species will be chosen based on significance of size and obvious characteristics that provide the ability for them to be easily identified by non-experts.
- C. Develop outreach materials with clear messaging and photos or illustrations for easy identification of the top twelve potential invaders.
- D. Develop agency staff training program so outreach and field personnel may effectively engage the public in early detection of introduced species.

STRATEGY IS-6: Develop partnerships with other agencies and organizations that are involved in issues related to introduced species to advise the sanctuary.

Activity 6.1 Develop a Technical Advisory Committee of agency experts to advise the sanctuary on coordinated introduced species management issues. This group would meet on an as needed basis and may coordinate with SAC working groups as needed.

Activity 6.2 Work with the West Coast Region to identify a regional representative of the California sanctuaries (GFNMS, CBNMS, MBNMS, CINMS) to sit on CalFed's Non-native Invasive Species Advisory Committee (NISAC). The regional representative's role is to communicate the sanctuaries' interests, needs, and efforts in addressing introduced species

issues. The representative will also be in attendance to listen and learn from experts in the field of introduced species and identify potential partners.

STRATEGY IS-7: *Develop a rapid response plan and streamlined permit process in order to respond in a timely manner to necessary eradication or control efforts in the sanctuary.*

Activity 7.1 Take the lead in coordinating with other agencies in the development of a rapid response plan to eradicate or control existing or new introductions in, or in areas adjacent to, the sanctuary.

- A. Examine existing models such as the Western Regional Plan or Southern California Caulerpa Action Team (SCCAT) to use as a template for developing a rapid response plan.
- B. Establish a rapid response team consisting of agency representatives actually responsible for responding in an emergency situation.
- C. Develop and execute mock training exercises.
- D. Develop a manual that outlines a rapid response fire alarm approach.
 - 1. Identify twelve new likely invaders (habitats, pathways, probable sites)
 - 2. Develop a separate response plan for each species
 - 3. Test the notification scheme (phone tree)
 - 4. Clarify and have approval on the “authority to act” agency ownership
 - 5. Identify stakeholder team, how will they be engaged, and who will notify them
 - 6. Identify the pool of experts (needs to be large), who, where, what kind of availability and expertise (eradication, management, biology, habitats, etc.)
 - 7. Formalize each part of the plan as a document and identify lead agency
 - 8. Form intervention team to carry out eradication or control effort in the field
- E. Review relevant laws, regulations, and policies to determine necessary permits that might be required in order to perform.
- F. Test all components of the rapid response plan.

STRATEGY IS-8: *Take action to control new introductions of introduced species.*

Activity 8.1 Work with the State Water Resource Quality Board to include in the definition for “impaired waters” those areas where introduced species have been identified. Section 303(d) of

Introduced Species Action Plan
GFNMS Draft Management Plan

the Clean Water Act requires the states submit to EPA a list of water bodies that do not meet water quality standards for specific pollutants (i.e., are “impaired”).

Activity 8.2 Request the reporting of all research activities in the sanctuary to determine: (1) the types of activities taking place that might accidentally introduce invasive species; and (2) understand who may be doing research or monitoring of introduced species.

STRATEGY IS-9: *Through outreach efforts, inform targeted audiences and industry about pathways through which introduced species may enter the sanctuary and educate those targeted audiences on prevention methods.*

Activity 9.1 Develop a targeted prevention program (other than the shipping industry, as ballast water is already being targeted).

- A. Identify and categorize potential vectors associated with introductions within and adjacent to the sanctuary.
- B. Identify audiences including: recreational and commercial boat users and fishermen; landscapers; adjacent residential homeowners; restaurants; aquarium stores; aquaculture industry; and bait shops.
- C. Identify and incorporate applicable features of existing outreach programs (e.g., Great Lakes Sea Grant) into the development of a program for the sanctuary.
- D. Develop messaging and method of delivery and integrate into other sanctuary outreach materials and education programs.

Potential Partners:

Federal: Point Reyes National Seashore (PRNS), Golden Gate National Recreation Area (GGNRA), NSF Integrative Graduate Education and Research Traineeship Program (IGERT) Intern Program, The National Centers for Coastal Ocean Science (NCCOS), National Marine Fisheries Service (NMFS), United States Fish and Wildlife Service (USFWS), San Francisco Bay National Estuarine Research Reserve (SFBNERR), Farallon National Wildlife Refuge, U. S. Environmental Protection Agency (EPA), United States Coast Guard (USCG), Office of National Marine Sanctuaries (ONMS), MBNMS Sanctuary Integrated Monitoring Network (SIMoN), BOEM (MARINe)

State & County: CA Department of Fish & Wildlife, SWRCB, Regional Water Quality Control Board (RWQCB), Marin Open Space, California Coastal Conservancy, University of California Davis (UCD), California State Lands Commission (CSLC), Sonoma County Water Agency, Sonoma State University, Sonoma County Water Agency, Sonoma Coast State Parks, CalFed, Bodega Marine Laboratory (BML), PISCO, SFSU, Marin Open Space, SFSU Romberg Tiburon Center, State Department of Public Health

Other: Audubon, Smithsonian, Point Reyes National Seashore Association (PRNSA), Point Blue Conservation Science, California Academy of Sciences, Berkeley Herbarium, Monterey Bay Aquarium Research Institute (MBARI)

Introduced Species Action Plan
GFNMS Draft Management Plan

GFNMS INTRODUCED SPECIES

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY IS-1: Develop a native and introduced species inventory.	Maintain an abundance and diversity of native marine/estuarine species: Detect, manage, and where feasible, eradicate new and established introduced species in the sanctuary.	Understand the current extent of introduced species in GFNMS.	To develop a spatial distribution of native species and introduced marine and estuarine species.	1) Complete native and introduced species inventory. 2) Maintain a database on the extent of introduced species in and adjacent to GFNMS. 3) Effectively use inventory as management decision-making tool to control further introductions.	Research Coordinator, Sanctuary Superintendent, Ecosystem Protection Coordinator	1) Native species inventory and introduced species inventory 2) Spatial Web-based database and GIS map of invasives
STRATEGY IS-2: Develop a program to detect introduced species in estuarine environments of the sanctuary. STRATEGY IS-3: Develop a monitoring program to detect introduced species in the rocky intertidal areas of the sanctuary. STRATEGY IS-4: Develop a monitoring program to detect introduced species in the pelagic environment of the sanctuary.	Maintain an abundance and diversity of native marine/estuarine species: Detect, manage, and where feasible, eradicate new and established introduced species in the sanctuary.	Create a new program and/or coordinate with existing programs to detect and monitor new introductions.	To detect, and thus improve ability to prevent, colonization or spatial expansion of introduced species.	Incorporate identification and monitoring of introduced species into existing monitoring programs, particularly in representative or high profile areas and targeting: known invasives, new species, and those with a likelihood of being established.	Research Coordinator, Education Coordinator, Ecosystem Protection Coordinator	1) Triennial summary reports of monitoring programs 2) GIS map of invasives

***Introduced Species Action Plan
GFNMS Draft Management Plan***

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY IS-7: Develop a rapid response plan and streamlined permit process to respond to eradication or control of introduced species.	Maintain an abundance and diversity of native marine/estuarine species: To detect, manage, and where feasible, eradicate new and established introduced species in the sanctuary.	Develop management actions to eradicate and/or control existing and new introductions.	1) Improve ability to rapidly respond to, and eradicate or control existing or new introductions in the sanctuary or areas adjacent to the sanctuary. 2) Effective rapid response should prevent the establishment or spread of introduced species.	1) Establish a rapid response plan with partner agencies and institutions, including preparedness training. 2) In coordination with other agencies, participate in a streamlined permit process.	Ecosystem Protection Coordinator, partners	1) Rapid response plan manual 2) Permits for pre-approved plans
STRATEGY IS-9: Outreach to targeted audiences on prevention methods.	Maintain an abundance and diversity of native marine/estuarine species: To prevent future introductions of introduced species in the sanctuary.	Identify and control current and potential pathways to prevent new introductions.	1) Decrease the number of pathways for, and sources of introduced species. 2) Control spreading of already established introduced species.	1) Develop a targeted prevention program directed at user groups and industry in and around sanctuary waters. 2) Through monitoring programs track numbers of new introduced species to determine effectiveness of outreach efforts. See Performance Measures for IS-1-4.	Ecosystem Protection Coordinator, Education Coordinator	1) Outreach materials 2) Best management practices identified in GFNMS special permit conditions



ECOSYSTEM PROTECTION: IMPACTS FROM FISHING ACTIVITIES ACTION PLAN

ISSUE STATEMENT

Although fishing activities may have impacts on living marine resources, habitats, and ecosystem dynamics, specific impacts to Gulf of the Farallones National Marine Sanctuary (GFNMS) from fishing activities in and around sanctuary waters are not well understood.

Some of the issues related to fishing or harvesting activities to be explored include: (1) impacts from trampling and harvesting of invertebrates in the intertidal; (2) gear impacts on habitats and living resources; (3) impacts on trophic levels from localized depletion of bait fish; and (4) region-wide declines in fish populations.

ISSUE DESCRIPTION

The diversity and abundance of fish and invertebrate species within the sanctuary are largely due to the variety of habitats, including intertidal mudflats, estuaries, rocky shorelines and deeper subtidal areas. The intertidal mudflats support large concentrations of burrowing organisms such as clams, snails, and crabs. Eelgrass beds occur on the more extensive flats of Tomales Bay, Bolinas Lagoon, and within the Esteros. Pacific herring and invertebrates depend on eelgrass beds in Tomales Bay to spawn and feed. The shallow, protected waters of the bays and estuaries are critical habitat for salmon and several species of perch and flatfish. In their journey from the ocean through Tomales Bay and into Lagunitas Creek, the federally listed, threatened Coho salmon depend on clear water, riparian vegetative cover, and a certain size gravel to complete their reproductive process. Accurate characterizations of the deeper subtidal habitats of the sanctuary are limited. Rocky banks in deep water are inhabited by large populations of rockfish, more than fifty species of which occur in the sanctuary. Sablefish and flatfish such as sole, sandab, and halibut are found on offshore soft-bottom habitats. Concentrations of sardines, northern anchovies, krill, and Pacific herring are also found in the sanctuary.

King salmon and rockfish have been the primary target species for sport fishing in GFNMS. On some weekend days, more than 1,000 clam diggers harvest gaper, geoduck, Washington and littleneck clams. The most important commercial harvests have included Pacific herring, salmon, rockfish, and Dungeness crab. Prawn and shrimp harvesting also take place in the area. Most of the commercial catches harvested in GFNMS are landed in San Francisco, Bodega Bay, Oakland, Half Moon Bay, and Sausalito. The tidal community includes a wide variety of invertebrates such as barnacles, limpets, black turban snails, mussels, sea anemones, abalone,

and urchins, which may be harvested as well. Gear types used in the GFNMS include hook and line, long lines, gill nets, seines, traps, bottom trawlers, and mid-water trawlers.

Management of commercial and recreational fisheries in California is the responsibility of the California Department of Fish and Wildlife (CDFW) in state waters (0-3 nautical miles), and National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) in federal waters (3 to 200 miles), although fisheries management plans may cover both state and federal waters. In contrast, GFNMS does not manage fisheries, but it does have a mandate to protect the entire sanctuary ecosystem and has authority to manage human uses that may impact sanctuary wildlife and habitats.

JURISDICTIONAL SETTING

The following is an overview of the relevant federal and state laws and regulations that may apply to fishing activities. This is not a comprehensive review of all laws and regulations related to fishing activities. Additional fishing regulations apply. The laws and regulations presented in this section are subject to change. For the most recent and applicable information refer to the Commercial Fish Laws and Licensing Requirements, the California Ocean Sport Fishing Regulation Book, the CA Code of Regulations, Title 14 § 632, and Code of Federal Regulations Title 50 § 660.

Federal Law

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801-1882

General Provisions

The Magnuson-Stevens Fishery Conservation and Management Act, commonly referred to as the Magnuson-Stevens Act (MSA), is the primary federal law governing marine fisheries management in the United States. The MSA was enacted in 1976 and has been amended many times over the years with a notable revision in 1996 including provisions to minimize bycatch (the incidental harvest of non-target species), and promote protection of essential fish habitat and catch and release in recreational fishing. The 1996 MSA revision is often referred to as the Sustainable Fisheries Act or SFA. Revisions in 2006 required an end to overfishing and to prevent overfishing through annual catch limits and accountability measures. The 2006 MSA revision is commonly referred to as the Magnuson-Stevens Reauthorization Act or MSRA.

The PFMC is one of eight regional fishery management councils established by the MSA. Over the last 30+ years, the PFMC has developed four fishery management plans (FMPs) and has addressed a wide range of fisheries issues through amendments to those plans. The four FMPs are focused on groundfish, salmon, coastal pelagics and highly migratory species. The Groundfish FMP covers 90 species of rockfish, flatfish, roundfish, sharks, skates, and others. Chinook and coho are the primary salmon species addressed in the Salmon FMP, while northern anchovy, market squid, Pacific sardine, Pacific mackerel, and jack mackerel are specified in the Coastal Pelagic Species FMP. Finally, the Highly Migratory Species FMP authorizes the PFMC to actively manage tunas (north Pacific albacore, yellowfin, bigeye, skipjack, and northern

Bluefin), sharks (common thresher, pelagic thresher, bigeye thresher shortfin mako and blue) billfish/swordfish (striped marlin, Pacific swordfish) and other highly migratory fishes (dorado). The PFMC also participates in international fishery management organizations such as the International Pacific Halibut Commission, and international commissions tasked with managing migratory tunas (albacore, yellowfin and other highly migratory species).

Coastal Pelagic Species Management

In 2006, the PFMC adopted Amendment 12 to the Coastal Pelagic Species Management Plan, which resulted in a complete ban on commercial fishing for all species of krill in West Coast federal waters. Amendment 12 also specified essential fish habitat for krill, an action that makes it easier to work with other federal agencies to protect krill. State laws prohibit krill landings by state-licensed fishing vessels in California, Oregon, and Washington. This broader prohibition applies to all vessels in PFMC managed waters.

Groundfish Management

The Groundfish FMP contains the rules for managing the groundfish fishery. It outlines the areas, species, regulations, and methods that PFMC and NMFS must follow to make changes to the fishery. A biennial management process was implemented in 2003 through an amendment 17 to the FMP. The biennial cycle implements management measures for a two-year period, rather than just for one year. Separate harvest specifications (allowable biological catch and optimum yield) are identified for each year in the two-year period. This cycle provides more time for PFMC and NMFS to work on other critical groundfish issues, and more time for public comment (NOAA 2006).

Groundfish are managed through numerous management measures including harvest guidelines, quotas, trip and landing limits, area restrictions, seasonal closures, and gear restrictions (such as minimum mesh size for nets and small trawl footrope requirements for certain areas. The trawl sector of the groundfish fishery recently shifted to an individual fishing quota (IFQ) system and harvest co-operative program that was implemented in 2011. This program is expected to reduce harvest capacity in the fishery, to make the fishery more efficient, and to lower bycatch in the fishery. All sectors of the groundfish fishery are currently constrained by the need to rebuild groundfish species that have been declared overfished (widow rockfish, canary rockfish, yelloweye rockfish, darkblotched rockfish, bocaccio, Pacific ocean perch, and cowcod). Rebuilding plans have been developed to help these species recover. Because of the low available harvest of species managed under rebuilding plans, the overall groundfish harvest has been significantly reduced.

Since 2003, several groundfish conservation areas have been implemented through regulation by NMFS to reduce overfishing on various groundfish species (NOAA 2006). A groundfish conservation area is defined by NMFS as “any closed area intended to protect a particular groundfish species or species group or species complex.” The Rockfish Conservation Areas (RCA) are the only groundfish conservation areas in the study area. The RCAs are large area closures intended to protect overfished shelf rockfish species (e.g. canary and yelloweye rockfish). The RCAs have boundaries defined by specific latitude and longitude coordinates that

approximate depth contours over the shelf and differ between gear types, for example trawl, non-trawl and recreational RCA, which vary throughout the year with cumulative limit periods. A core area has protected a region over the shelf for more than a decade.

Based on recommendations within amendment 19 of the Pacific Coast Groundfish fishery management plan, in 2006 NMFS implemented essential fish habitat (EFH) for groundfish. To minimize impacts on ecologically important habitats of groundfish EFH, NMFS implemented areas closed to bottom trawl gear or all bottom contact gear (trawl and other bottom tending gear). There are currently 50 such closed areas on the west coast and four bottom trawl closed areas within GFNMS: Point Arena North, Point Arena South and Fanny Shoal/Farallon Island Closed Areas, and portions of the Bottom Trawl Footprint Closure. The latter covers all areas westward of the 1280 m (700 fathom) contour out to the 3500 m (1914 fathom) contour, within the EEZ. The Bottom Trawl Footprint Closure was designed to minimize adverse fishing effects on EFH, by freezing the footprint of where trawling occurred in 2004. The PFMC is currently in the process of reviewing current groundfish EFH. designations.

State Law

Marine Life Management Act

California's Marine Life Management Act (MLMA) regulates the harvest of California's marine living resources, including commercial fisheries. The fishery management system established by the MLMA applies to four groups of fisheries.

1. The nearshore finfish fishery and the white seabass fishery;
2. Emerging fisheries – new and growing fisheries that are not currently subject to specific regulation;
3. Those fisheries for which the Fish and Game Commission held some management authority before January 1, 1999. Future regulations affecting these fisheries will need to conform to the MLMA; and
4. Those commercial fisheries for which there is no statutory delegation of authority to the Fish and Game Commission and Department (CDFG 2004a).

The California Aquaculture Development Act

The California Aquaculture Development Act of 1979 established the California Department of Fish and Wildlife (CDFW) as the lead agency for aquaculture in the state. In 1982, legislation was passed that provided guidelines and authority for aquaculture regulations developed by the Fish and Game Commission. These guidelines and authority for aquaculture regulations are in California Code of Regulations, Title 14, Natural Resources: Division 1. Fish and Game Commission – Department of Fish and Wildlife. These regulations are referred to as Title 14. CDFW is responsible for issuing leases and permits for specific aquaculture activities and coordinating with two committees, the Aquaculture Development Committee and the

Aquaculture Disease Committee, which exist for the purpose of interaction among sectors of the aquaculture industry and government regulatory agencies.

There are several other state agencies that have regulatory authority over certain aspects of aquaculture. They include the California Departments of Health Service and Food and Agriculture (disease and health), the State Lands Commission (leased lands), the Coastal Commission (coastal uses and public recreation and access), and the State Water Resources Control Board (water quality).

In federal waters NOAA, US Army Corps of Engineers, EPA, DOI, USDA and the US Department of Health and Human Services all have various jurisdictional oversight over aquaculture facilities and operations. There is also pending legislation relating to aquaculture in offshore waters.

California Code of Regulations, Title 14 Division 1

The Fish and Game Commission has broad authority under Title 14 to establish regulations that restrict both sport and commercial fishing and otherwise afford protection to marine organisms and habitats. This includes the establishment of a network of marine protected areas (MPAs) in California waters to protect habitats and preserve ecosystem integrity. California MPAs within GFNMS have been in effect since May 1, 2010 and include three types of MPA designations: 1) state marine reserves, in which it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource, except under a scientific collecting permit or specific authorization from the California Fish and Wildlife Commission for research, restoration, or monitoring purposes; 2) state marine conservation areas, in which it is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource for commercial or recreational purposes, or a combination of commercial and recreational purposes except as specified; and 3) state marine recreational management areas, in which it is unlawful to perform any activity that would compromise the recreational values for which the area may be designated. Recreational opportunities may be protected, enhanced, or restricted, while preserving basic resource values of the area. No other use is restricted unless specified.

Restricted Access Fisheries

Restricted access programs in fisheries limit the quantity of persons, vessels, or fishing gear that may be engaged in the take of a given species of fish or shell fish. Restricted access may also limit the catch allocated to each fishery participant through harvest rights such as individual or community quotas. A primary purpose of restricted access programs is to balance the level of effort in a fishery with the health of the fishery resources. In most situations, except harvest rights, this involves setting an appropriate fishery capacity goal.

California's Fisheries Management Programs

In 1977, California focused its first limited access program on the abalone fishery, followed in 1979 with legislation requiring salmon limited entry permits. In the 1990s, industry began to demand more restricted access programs, so the California Department of Fish and Wildlife

(CDFW) began to address restricted access in a comprehensive manner. In 1996, a limited entry review committee was formed to develop a standard restricted access policy for the Fish and Game Commission. The commission approved the restricted access policy in June 1999.³

Since the passage of the Marine Life Management Act (MLMA) of 1998, which became law on January 1, 1999 and the commission's subsequent adoption of the restricted access policy in 1999, more restricted access program responsibility has shifted from the legislature to the commission and CDFW, including the management of nearshore finfish and Market Squid. The CDFW works closely with constituent advisory committees and task forces to carefully design and evaluate restricted access plans for submission to the commission. The commission then conducts hearings for further public input. The plan is then returned to the CDFW and advisory groups for any necessary revisions before going to the commission for final approval. The legislature is involved and informed with fisheries that require legislation to implement restricted areas, such as the Dungeness crab fishery.

ECOSYSTEM PROTECTION: FISHING ACTIVITIES GOALS

Maintain an abundance and diversity of native marine/estuarine/intertidal species:

1. Better understand the impacts from fishing activities on sanctuary ecosystems.
2. Support fishing that is compatible with sanctuary goals and ecosystem protection.

ECOSYSTEM PROTECTION: FISHING ACTIVITIES OBJECTIVES

1. Based on the best available scientific and socioeconomic information, the sanctuary will facilitate the evaluation of the status and trends in marine populations (and their causes) in sanctuary waters; and identify and evaluate impacts on sanctuary ecosystems from fishing activities.
2. GFNMS will facilitate the protection of cultural resources and wildlife and habitats in its boundaries; and strive to maintain native biodiversity and the health and balance of the sanctuary ecosystem.

ECOSYSTEM PROTECTION: FISHING ACTIVITIES ACTION PLAN

STRATEGY FA-1: *Develop an ecosystem characterization of the sanctuary to better understand types and distributions of habitats, species, and processes.*

Activity 1.1 Modify the Applied California Current Ecosystem Assessment Studies (ACCESS) and develop additional research components as necessary to build a baseline characterization and regional monitoring of the sanctuary including habitat, physical, and biological characteristics.

- A. ACCESS will systematically survey and assess the distribution and abundance of marine birds, sea turtles and marine mammals. The study will simultaneously assess ocean habitat, and biological productivity. Additional components will include:

Habitat characterization including mapping substrate type/bathymetry (static)

Biological characterization including species abundance and distribution, spatial and temporal

Physical characterization including oceanographic features (spatial and temporal) and pelagic (dynamic)

B. Use GIS as a tool to characterize sanctuary habitats, species, and processes.

Activity 1.2 Conduct workshops to develop a coordinated plan for regional monitoring and ocean observing system activities to supplement the NMFS five-year surveys (per recommendations developed during the marine mammal/seabird workshop in December 2002). These workshops will develop a plan to expand appropriate methodologies for monthly and annual ocean observing and trophic structure surveys across all five West Coast sanctuaries.

Activity 1.3 Based upon available ship time, facilitate expansion of California Cooperative Oceanic Fisheries Investigations (CalCOFI) transect lines through the five West Coast sanctuaries.

STRATEGY FA-2: *Evaluate impacts from fishing activities on sanctuary resources.*

Activity 2.1 Evaluate types and levels of impacts from fishing activities. Consider the following factors when conducting an evaluation:

1. Habitat impacts (physical)
2. Habitat impacts (biological)
3. Levels of by-catch (shellfish and crabs, finfish, sharks, marine mammals, seabirds and sea turtles, juvenile life stages)
4. Impacts associated with species' life history (such as aggregated behavior during spawning)

STRATEGY FA-3: *Develop policy recommendations or management action(s) to address impacts from fishing activities on sanctuary resources.*

Activity 3.1 If there is an indication of potential significant negative impacts on sanctuary resources from fishing activities, then evaluate and make recommendations on actions the sanctuary should take to address impacts from specific activities. A stakeholder-based, working group could be convened by the sanctuary advisory council, which could include: resource management agencies, interest groups, user groups, fishermen representing different gear types, and the scientific community. The working group could make recommendations to the SAC based on best available scientific and socioeconomic data.

STRATEGY FA-4: *Develop public awareness about the value and importance of the historical and cultural significance of maritime communities and their relationship and reliance on healthy sanctuary waters.*

Activity 4.1 Develop a maritime heritage and fishing community model.

- A. Identify an appropriate marina or harbor to profile as a living maritime community.
- B. Work together with the fishing community, businesses, chambers of commerce and local government to develop a marketing and outreach plan to profile the fishing community, the associated working harbor, and their relationship to the sanctuary and its healthy marine resources. The plan may include workshops, signage, kiosks, events, attractions, and activities. The plan will also articulate clear and consistent messages.
- C. Educate the community about sustainable fishing practices and the role of consumers. Work with the fishing community to promote compatible fishing practices in the sanctuary.

STRATEGY FA-5: *Maintain consistent and coordinated region-wide sanctuary representation at the Pacific Fishery Management Council and Fish and Game Commission meetings.*

Activity 5.1 Maintain a regional sanctuary representative to attend Pacific Fishery Management Council (PFMC) and Fish and Game Commission (FGC) meetings and participate as appropriate.

- A. Inform and update the PFMC and FGC on current activities and emerging fishing issues in GFNMS as appropriate.
- B. Listen and track issues PFMC and FGC are addressing.
- C. Create briefing packets, as appropriate, for the PFMC and FGC on sanctuary activities.

Potential Partners:

Federal: National Park Service (NPS), National Marine Fisheries Service (NMFS), Bureau of Ocean Energy Management (BOEM), United States Geological Survey (USGS), National Oceanographic Data Center (NODC), Southwest Environmental Response Management Application (ERMA)(SHIELDS), Office of Law Enforcement (OLE), The National Centers for Coastal Ocean Science (NCCOS), sanctuary advisory council (SAC), Sea Grant, NOAA MPA Center, Naval Postgraduate School (NPS)

State & County: CA Department of Fish and Wildlife, California Department of Boating and Waterways (CDBW), Central California Ocean Observing Systems (CeNCOOS), Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), Moss Landing Marine Laboratories (MLML), California Species of Special Concern (CSC)

Other: Pacific Fisheries management Council (PFMC), fishing community, visitors bureaus, tourism industry and business community, Farallones Marine Sanctuary Association (FMSA), Ford Consulting Inc., H. T. Harvey Consulting, Point Blue Conservation Science, Center for Integrated Marine Technology (CIMT), various marine laboratories and research institutions, commercial and recreational fishing interests, conservation community, agricultural landowners, the STRAW Project, Friends of the Esteros, Environmental Action Committee of West Marin, Sonoma Land Trust, MALT

Ecosystem Protection: Impacts from Fishing Activities Action Plan
GFNMS Draft Management Plan

GFNMS ECOSYSTEM PROTECTION: IMPACTS FROM FISHING ACTIVITIES

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY FA-1: Develop an ecosystem characterization of the sanctuary to better understand types and distributions of habitats, species and processes.	Maintain an abundance and diversity of native marine/estuarine/intertidal species: 1) Better understand the impacts from fishing activities on sanctuary resources.	Based on the best available scientific and socio-economic information, the sanctuary will: 1) facilitate the evaluation of the status and trends in marine populations (and their causes) in sanctuary waters; and 2) identify and evaluate impacts on sanctuary resources from fishing.	Increase understanding of the habitats and communities of the sanctuary.	Complete site characterization including: detailed oceanographic climatology; clear delineation of habitat types and distribution; and relative abundance and distribution of species.	Sanctuary Superintendent, Research Coordinator, Ecosystem Protection Coordinator	1. Oceanographic climatology report with effective maps and graphics; 2. fine scale bathymetric and habitat maps; 3. technical data summary on species distribution and abundance
STRATEGY FA-3: Evaluate impacts from fishing activities on sanctuary resources. STRATEGY FA-4: Develop policy recommendations or management action(s) to address impacts.	Maintain an abundance and diversity of native marine/estuarine/intertidal species: 1) Better understand the impacts from fishing activities on sanctuary resources. 2) Allow for fishing that is compatible with sanctuary goals and ecosystem protection.	Based on the best available scientific and socioeconomic information, the sanctuary will: 1) facilitate the evaluation of the status and trends in marine populations (and their causes) in sanctuary waters; 2) identify and evaluate impacts on sanctuary resources from fishing, and 3) identify and develop appropriate actions to address any negative impacts from fishing activities on sanctuary resources.	Improved ability to carry out a consistent and systematic evaluation of impacts from fishing activities occurring in the sanctuary.	Develop series of management or policy response categories	Sanctuary Superintendent, Ecosystem Protection Working Group, sanctuary advisory council	Compatibility index matrix

Ecosystem Protection: Impacts from Fishing Activities Action Plan
GFNMS Draft Management Plan

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY FA-5: Bring public awareness to the value and importance of maritime communities.	Maintain an abundance and diversity of native marine/estuarine/intertidal species: 1) Allow for fishing that is compatible with sanctuary goals and ecosystem protection.	The sanctuary will seek to facilitate the management of fisheries resources within its boundaries in order to protect cultural resources, to protect important natural resources, and to maintain biodiversity and the health and balance of the sanctuary.	Increase understanding of fishing communities in and around the sanctuary.	Complete maritime heritage and fishing community model plan.	Sanctuary Superintendent, Education Coordinator, sanctuary advisory council	Signs, kiosks, workshops, attractions, events and activities



IMPACTS FROM VESSEL SPILLS ACTION PLAN

ISSUE STATEMENT

There is a continuing risk of vessel spills that could impact marine mammals, seabirds and other natural resources in and around Gulf of the Farallones National Marine Sanctuary (GFNMS). Recognizing that spills can occur from any transiting vessel as they all carry crude oil, bunker fuel, and/or other hazardous material or cargo, GFNMS will take every opportunity to enhance prevention and improve response efforts to offset impacts from potential cumulative and catastrophic events.

ISSUE DESCRIPTION

The volume of large vessel traffic in and out of San Francisco Bay is significant. According to USCG unpublished data from the USCG Automatic Identification System (AIS) Vessel Traffic Service, in 2012 a total of 7,450 vessels transited in and out of San Francisco Bay. AIS vessel traffic patterns in and out of San Francisco Bay capture information on all vessels over 300 gross tons, which includes tugs, tanker ships, cruise ships, container vessels, military craft and research vessels.

In the past decade, the sanctuary has seen an increase in cruise ship traffic (see Wildlife Disturbance Action Plan for more information). In 2012 California ports handled an estimated 700 cruise ship port calls. The Port of San Francisco experienced steady gains in cruise ship traffic, from 44 calls and 56,968 passengers in 1994 to 65 calls and 195,000 passengers in 2012 (SFPORT 2013). Itineraries from San Francisco include round trip cruises to Alaska and Mexico.

Historically, the total number of spills from large transiting vessels is small, but the potential impacts are enormous, given the number and volume of vessels and the hazardous cargo lane's proximity to the Farallon Islands and major seabird and marine mammal populations. Large commercial vessels (LCVs) are of particular concern for spills because in addition to their cargo, they can carry up to 1 million gallons of bunker fuel, a heavy, viscous fluid similar to crude oil, which they use for fuel. According to the *2012 Preliminary Report of California Oil and Gas Production Statistics*, published by the California Department of Conservation Division of Oil, Gas, and Geothermal Resources, California produced approximately 197.5 million barrels oil in 2012 (California Department of Conservation, 2013). In addition to this significant amount of oil production, California refines an even larger amount of oil annually, thus, there is considerable risk of vessel spills from oil tankers transiting through California waters.

Large cruise ships can also be a source of vessel discharge. Cruise ships are regulated by state and federal laws and regulations aimed at reducing air pollution, graywater, sewage, sewage sludge, and hazardous waste. However, a cruise ship spill could result in discharge of large volumes of untreated sewage and untreated graywater into the Sanctuary.

Smaller vessels, including recreational vessels or commercial fishing vessels smaller than 300 gross tons also pose a threat. In many cases the harm is localized to a particular location or set of isolated locations. However, when small spills happen in the vicinity of a particularly sensitive environment such as a rocky reef, estuary or shallow bay including areas like Duxbury Reef, Bolinas Lagoon or Tomales Bay, the impacts can be substantial. Data from 2000 to 2011 show that about 200 commercial fishing vessels make landings in the ports adjacent to the sanctuary on an average annual basis. There are thousands of recreational vessels in marinas, harbors, and moorings within and adjacent to the sanctuary that can also transit sanctuary waters.

SIGNIFICANT RESOURCES AND IMPACTS FROM VESSEL SPILLS

GFNMS was designated in 1981 to protect significant concentrations of seabirds and aquatic birds; marine mammals (pinnipeds and cetaceans); fish; marine flora (algae); benthic fauna; and estuarine environments.

The sanctuary has diverse biological communities in close proximity to one another. Habitats within the sanctuary include rocky intertidal, sandy beach, estuarine, pelagic (open ocean), benthic (sea floor), and islands. The variety and size of habitats support a high diversity and abundance of species. The intertidal mudflats support large concentrations of burrowing organisms such as clams, snails, and crabs. Seagrass beds occur on the more extensive flats of Tomales Bay, Bolinas Lagoon and also within the Esteros. Pacific herring and invertebrates depend on seagrass beds in the Bay to spawn and feed. The shallow, protected waters of the bays and estuaries are critical habitat for salmon and several species of perch and flatfish. In their journey from the ocean to the Russian River, Tomales Bay and into Lagunitas Creek, the federally-listed, threatened Coho salmon depend on clear water, riparian vegetative cover, and a certain size gravel to complete their reproductive process.

The tidal community includes a wide variety of invertebrates and marine plants and algae, such as barnacles, limpets, black turban snails, mussels, sea anemones, abalone, and urchins, which may be harvested. The intertidal zone is an important breeding ground, spawning and feeding area for many marine organisms. Impacts from oil and other spills including cargo vessel containers in the intertidal zone may include smothering of benthic biota, and fouling or poisoning of organisms.

Accurate characterizations of the various habitats of the sanctuary are limited. Rocky banks in deep water are inhabited for the most part by large populations of rockfish, more than fifty species of which occur in the sanctuary. Sablefish and flatfish such as sole, sandab, and halibut are found on offshore soft-bottom habitats. Concentrations of sardines, Northern anchovies and Pacific herring are also found in the sanctuary. A spill resulting in a surface slick could affect upper water biota such as squid, Northern anchovy, Jack Mackerel, and the pelagic portion of the

planktonic food chain. Heavier oils and chemicals that sink could affect shellfish such as crabs or lobster and finfish such as flounders and sole.

Sensitive Species of the Sanctuary

The sanctuary's habitats are home to a number of species that are federally-listed as endangered or threatened. The list includes highly recognized species such as blue and humpback whales, Marbled Murrelets, and Coho and Chinook salmon, as well as lesser-known species such as the Tidewater Goby and Short-tailed Albatross. Of particular concern to the GFNMS are impacts on seabirds and marine mammals from potential vessel spills.

Seabirds

The nesting seabird population is a significant natural resource of the sanctuary. The Farallon Islands support the largest concentration of breeding seabirds in the contiguous United States. These birds forage in the Gulf of the Farallones, and are highly dependent on the productive waters of the sanctuary. Of the 164 species of birds known to occur in the sanctuary, 12 species of seabirds have breeding colonies on the Farallon Islands and feed in the sanctuary. These include Ashy and Leach's Storm-Petrels; Brandt's, Pelagic, and Double-crested Cormorants; Western and California Gulls; Common Murres; Pigeon Guillemots; Cassin's Auklets; Rhinoceros Auklets; and Tufted Puffins. Other birds breeding on the Farallon Islands include Black Oystercatchers (a shorebird), Rock Wren, Common Ravens, and Peregrin Falcons.

Floating oil affects seabirds through ingestion, inhalation, irritation of eyes and membranes, and fouling of feathers. Feather contamination is the primary cause of immediate mortality because of the resulting inability to fly, avoid predators, and forage underwater. It also lowers body temperature due to loss of insulation. Birds may also ingest oil while preening or grooming contaminated feathers. Vulnerability of different species of birds to surface oil is based on several factors, including their likeliness to dive in the water and flock on the surface. To some extent, all marine birds that breed in large colonies are vulnerable to contact with floating oil during the nesting season due to their large congregations. Indirect effects to birds may include accumulation of toxic components from their food, exposure to secondary chemicals (dispersants), and destruction of habitat or prey resources.

Marine Mammals: Pinnipeds

Thirty-six species of marine mammals have been observed in GFNMS, including six species of pinnipeds (seals and sea lions). Many of these animals occur in large concentrations and are dependent on the productive and secluded habitats for breeding, pupping, feeding, hauling-out, and resting during migration. The Farallon Islands provide habitat for breeding populations of five species of pinnipeds, and support one of the largest concentrations of California sea lions and northern elephant seals within the sanctuary.

Harbor seals breed on the Farallon Islands and in mainland rookeries. The Gulf of the Farallones region contains one-fifth of the California population of harbor seals, which was estimated at 30,000 in 2012.

Impacts from Vessel Spills Action Plan

GFNMS Draft Management Plan

For more than 170 years prior to 1996, northern fur seals (*Callorhinus ursinus*) had not been known to breed on the Farallon Islands, but in recent years, a colony has resumed breeding on the South Farallon Islands during the summer. As of August 2012, this colony was estimated to contain 521 individuals, 201 of which were pups. From November to June, thousands of female and immature fur seals migrate through the western edge of the sanctuary along the continental shelf. Of all the marine mammals in the sanctuary, fur seals are the most sensitive to oil spills because they depend largely on their fur for insulation.

Recently delisted from the threatened status, Steller sea lions occur year-round in the sanctuary. This population has decreased dramatically in the southern part of its range, which includes the Farallon Islands. The decline throughout the Gulf of the Farallones and California has amounted to 80 percent over the past thirty years. The California sea lion is the most conspicuous and widely distributed pinniped in the sanctuary. It is found year-round in the Gulf with the population increasing at about 8-12 percent each year. The northern elephant seal is the largest pinniped species in the sanctuary, with a total breeding population in the sanctuary of about 1,700 individuals¹.

Impacts to pinnipeds from floating oil include inhalation, fouling of fur, ingestion, and irritation of eyes and membranes. Particularly detrimental to pinnipeds is the contamination of fur that may cause loss of buoyancy and impairment of normal thermal regulation.

Marine Mammals: Cetaceans

Twelve cetacean species are seen regularly in the sanctuary, and of these, the minke whale, harbor porpoise, Dall's porpoise, and Pacific white-sided dolphin are considered year-round residents. The harbor porpoise is the most abundant small cetacean in the Gulf of the Farallones, with approximately 9,000 porpoises in the central California region.

Gray whales and other large baleen and toothed whales migrate from Alaska southward through the sanctuary. The northward migration of gray whales begins at the end of February and peaks in March. A few gray whales remain in the sanctuary during the summer. An increasing number of other species have been seen feeding in the sanctuary between April and November, including humpback and blue whales, representing one of the largest congregations of whales in the Northern Hemisphere.

Although the effects of oil on cetaceans are not well understood, it is believed the oil could cause both short- and long-term impacts. For example, because baleen whales are filter feeders, they are susceptible to direct ingestion of oil, oil-covered substances, and oil spill remediation chemicals such as dispersants and bioremediation agents. It is also thought that oil may irritate

¹ Berger, R. W. 2013. Population Size and Reproductive Performance of northern elephant seals on the South Farallon Islands, 2012-2013. Unpublished report to the US Fish and Wildlife Service. PRBO Conservation Science, Petaluma, California. PRBO Contribution Number 1932.
National Park Service, 2013, unpublished data

the eyes of whales and possibly interfere with breathing. Some whales, such as grey whales, have been seen avoiding slicks, while others have been found with oiled baleen.

Socioeconomic, Cultural, and Historical Resources Impacts

A large oil spill could pose a potentially serious threat to commercial and recreational industries such as fishing, especially in or near valuable fishing areas; and wildlife viewing/tourism, including whale watching, shark tourism, and diving. The type and extent of impacts depend on timing with respect to spawning season, migration patterns, oil type (solubility or toxicity), and prevailing weather conditions. A large spill can also impact historical resources including submerged archaeological sites, such as underwater shipwrecks.

Dispersants

During an oil spill, responding agencies may choose to use chemical dispersants after an evaluation of environmental tradeoffs for all potentially impacted resources in the spill zone. Chemical dispersants are used to accelerate the natural dispersion of oil into the water column in order to reduce environmental impacts associated with surface slicks (e.g., impacts to marine mammals, seabirds, marshes), to enhance removal of oil from the environment through biodegradation, and to rapidly reduce toxicity through dilution. The potential impact from the use of chemical dispersants on wildlife is a complex issue and more research needs to be done. Generally, the use of chemical dispersants introduces higher total concentrations of petroleum hydrocarbons into the water column than naturally dispersed oil (e.g. from wind and wave action). This higher concentration may have a larger footprint and potentially impact a wider range of species that would not likely have been exposed or affected by the surface oil slick. Dispersed oil can expose fish in the water column to potential toxic effects. Nearly all chemicals are toxic at some concentration. Assessing the toxicity of oil at the surface or chemically dispersed oil in the water column depends upon environmentally-relevant concentrations. It is likely that a dispersed oil plume generated by an offshore dispersant operation will rapidly be diluted to concentrations not expected to be problematic to most species within the water column or bottom habitats. The negative impacts on certain species may be localized; however, given their wide larval distribution there may not be long-term/regional impacts or population-level effects from local dispersant use.

Different organisms and life stages have varying sensitivities. Both embryo-larval stages and early juvenile life stages of wildlife are generally more sensitive to chemicals than are adults of the same species. Many California endemic species have been used in toxicity studies involving oil and dispersants (including red abalone, giant kelp, mysid shrimp, Chinook Salmon, and Top Smelt). Species of concern found in the Gulf of the Farallones that have not had toxicity test data include black abalone and Dungeness crab. Most zooplankton populations are not likely to be permanently affected by oil spills and are expected to recover due to their high population numbers and wide distribution.

Water containing dispersed oil droplets and oil that reaches the gills of fish can also potentially cause effects through ingestion and respiration. Juvenile out-migrating salmon are potentially

more vulnerable to oil and dispersed oil due to increased residency time in the Gulf of the Farallones and generally slower swim speeds. Rockfish are found wherever suitable habitat is located in the sanctuaries. Rockfish do not move widely and are considered more vulnerable to oil spills locally, but are generally found at depths that provide significant dilution for dispersed oil.

There is much information on the potential effects of oiling on birds but little information on the effects of dispersants or chemically dispersed oil on feathers or ingestion at environmentally-realistic concentrations. Indirect effects to birds may include accumulation of toxic components from their food, exposure to secondary chemicals (dispersants), and destruction of habitat or prey resources.

JURISDICTIONAL SETTING

The following is an overview of the relevant federal and state laws and regulations that may apply to vessel spills. This is not a comprehensive review of all laws and regulations related to vessel spills, and additional regulations could apply. The laws and regulations presented in this section are subject to change.

Federal Law

Oil Pollution Control Act, 33 U.S.C. § 2701 et seq.

The Oil Spill Prevention Act (OPA) regulates discharges of oil or oily mixtures from vessels. Except for discharges from machinery space bilges, tankers subject to the OPA may not discharge oil or oily mixtures unless they are 50 nautical miles from the nearest land and the total quantity of oil discharged cannot exceed 1/15,000 of the total cargo capacity. In addition, an oil discharge by any vessel regulated by the OPA must be made while the vessel is en route. The instantaneous discharge rate must not exceed 60 liters per mile.

The USCG is the federal government's primary maritime law enforcement agency. The USCG's missions include maritime law enforcement, national security, maritime safety, and marine environmental protection. For ocean and coastal activities, the USCG manages maritime transportation activities in order to minimize loss of life and injury to the environment. The USCG has historically held the primary responsibility for ensuring cleanup of any oil spill or other pollutants in the marine environment. The USCG requires vessels to have approved response plans detailing owner and operator response to an oil spill and ensuring proper response activities. Vessels are also required to have salvage and firefighting plans in place, these are necessary to prevent incidents from becoming spills. To avert oil spills and promote safety, the USCG inspects vessels carrying oil and other hazardous materials. Pursuant to OPA, which defines ground rules for dealing with oil pollution events and recommends pollution prevention measures, the USCG has responsibility for preparing most of the regulations necessary to implement OPA. Additionally, the USCG must be consulted in the development of oil spill contingency plans for marine oil and gas facilities and terminals. OPA allows for natural resource damage assessment recoveries and subsequent restoration by federal, state and tribal and state resource trustees.

Ports and Waterways Safety Act 33 U.S.C. §§ 1221 et seq.

The Ports and Waterways Safety Act (PWSA) is designed to promote navigation and vessel safety and the protection of the marine environment. The PWSA authorizes the USCG to establish vessel traffic services and systems for ports, harbors, and other waters subject to congested vessel traffic. The San Francisco Vessel Traffic Separation Schemes (VTSS) are designed to prevent vessel collisions by separating vessels going in opposite directions. Outside the traffic lanes, vessels may proceed in any direction consistent with good seamanship.

State Law

Lempert-Keene-Seastrand Oil Spill Prevention and Response Act

The Office of Spill Prevention and Response (OSPR) was created within the California Department of Fish and Wildlife (CDFW) as the lead state agency charged with oil spill prevention and response. The OSPR Administrator has substantial authority to direct spill response, cleanup, and natural resource assessment activities in state waters. Although OSPR is the lead state agency for oil spill prevention and response, this responsibility is shared with twenty-two agencies represented on the State Interagency Oil Committee. OSPR is involved in a variety of programs to prevent spills in the marine environment. One of the most important prevention programs is the harbor safety committee process established to reduce risk of marine vessel accidents within or on approach to the major harbor facilities. In conjunction with navigation safety, OSPR is also working with the USCG regarding evaluation of vessel traffic routing and other safety measures to reduce pollution incidents off the coast of California.

LARGE VESSEL OIL SPILLS IN THE GULF OF THE FARALLONES

1971	Two vessels collide under Golden Gate Bridge (840,000 gallons of Bunker C oil)
1984	T/V <i>PUERTO RICAN</i> (1.4 million gallons of oil, stern sunk with 8,500 barrels of bunker fuel, estimated 2,873 birds killed, including 1,856 Common Murres)
1986	T/V <i>APEX HOUSTON</i> (oil barge, 25,500 gallons of oil between San Francisco and Long Beach, 9,000 birds including 6,000 Common Murres killed)
1990	Two mystery spills from San Francisco to Monterey County, source and amounts undetermined
1996	S/S <i>CAPE MOHICAN</i> (estimated 39,890 gallons of oil, 7,000 birds killed)
1997-8	S/S <i>JACOB LUCKENBACH</i> / Point Reyes Tarball Incident (oil washes onto beaches from Salmon Creek to Pillar Point), later determined to be part from the S/S <i>JACOB LUCKENBACH</i> which sunk in 1952

Impacts from Vessel Spills Action Plan
GFNMS Draft Management Plan

1998	T/V <i>COMMAND</i> (3,000 gallons heavy crude or bunker oil, estimated 11,193 birds killed, 75 percent of which were Common Murres)
1990-2002	S/S <i>JACOB LUCKENBACH</i> (clean up and removal of approximately 100,000 gallons, (2,380 bbl), occurred summer of 2002, however, it is estimated that more than 300,000 gallons of bunker fuel oil chronically leaked into the sanctuary from the sunken vessel between 1953 and 200.) 2) An estimated 29,000 gallons remains on board in inaccessible areas.
2007	M/V <i>COSCO BUSAN</i> (53,000 gallon bunker oil spill in San Francisco Bay that spread into the sanctuary.)

VESSEL SPILLS GOAL

1. Reduce the risk to sanctuary natural resources from spills.

VESSEL SPILLS OBJECTIVES

1. Assess level of risk from vessel traffic and determine whether improvements can be made to reduce risk.
2. Develop long-term monitoring programs within the sanctuary to identify trends and take proactive measures to reduce risk from vessel spills.
3. Review current response programs and identify areas of improvement, focusing on sanctuary resources at risk.
4. Develop outreach program for maritime industry, fishing, and recreational boating communities based on risk assessment and long-term monitoring results.
5. Provide for continuous evaluation and leverage opportunities for improvement in coordination with partners.

VESSEL SPILLS ACTION PLAN

STRATEGY VS-1: *Expand Monterey Bay National Marine Sanctuary (MBNMS) drift analysis model to include Point Arena and Mendocino.*

Activity 1.1 Expand MBNMS drift analysis model north to Point Arena/Mendocino using existing data. The current model of vessel drift rates and tug response times only extends as far north as San Francisco Bay. Seasonal variability and coverage north to Mendocino is necessary to protect GFNMS.

- A. Work with the Naval Postgraduate School (NPS) in Monterey (producers of the current model) and investigate feasibility of extending the model north and including seasonal

variability and consult with NOAA Office of Response and Restoration (ORR) to ensure compatibility with NOAA's GNOME and TAP spill trajectory models.

STRATEGY VS-2: *Refine oceanographic data used in existing spill and drift model to increase accuracy of risk assessments.*

Activity 2.1 Revise existing oceanographic circulation model to reflect the unique fine-scale features of the Gulf of the Farallones and consult with NOAA ORR to ensure compatibility with NOAA's GNOME and TAP spill trajectory models.

- A. Work with NOAA ORR, MBNMS, USCG, and other relevant partner agencies to develop recommendations for installing current meters at the appropriate sites.

STRATEGY VS-3: *Evaluate recent vessel routing changes.*

Activity 3.1 Evaluate how the vessel routing adjustments have affected GFNMS, what lessons have been learned, and what improvements could be made.

- A. Examine current Vessel Traffic System (VTS) data from USCG, collect information from Automated Identification System (AIS), determine if revised lanes are being used correctly and, if not, then determine if a correction needs to occur (e.g., education, send information to Port Access Route Studies [PARS]).
- B. Make recommendations to USCG based on findings of the evaluation.

STRATEGY VS-4: *Track distribution and numbers of species of concern and habitats in relation to probable spill trajectories.*

Activity 4.1 Refine resources-at-risk analysis for Gulf of the Farallones. The resources-at-risk assessments define the seasonal distribution and numbers of sensitive species and habitats in relation to probable spill trajectories.

Activity 4.2 Modify ACCESS and develop additional research components as necessary to build a baseline characterization and to monitor sanctuary habitats and physical and biological characteristics. This information will also be used for natural resource damage assessment and restoration of pelagic species, including trophic levels, spill response and the use (applicability) of dispersants and in-situ burning.

- A. ACCESS will: (1) systematically survey and assess the distribution and abundance of marine birds, mammals, and krill; (2) simultaneously assess ocean habitat; and (3) simultaneously assess biological productivity. Additional components to include:
 - 1. Habitat characterization including mapping substrate type/bathymetry (static)
 - 2. Biological characterization including species abundance and distribution, spatial and temporal

3. Physical characterization including oceanographic (spatial and temporal), and pelagic (dynamic) features
4. Monitoring to detect changes in spatial and temporal oceanographic features and biological sentinel species for historic comparison with injury assessment

STRATEGY VS-5: *Participate in Area Contingency Planning and engage in NMSA consultation during the revision of the ACPs in the region to address risks to sanctuary resources.*

Activity 5.1 Review Regional Response Plan (RRP) and Area Contingency Plan (ACP), including location of Oil Spill Response Organization (OSRO) pre-positioned response equipment.

- A. Participate in SF Bay Area Contingency Meeting and Wildlife Operations meetings.

Activity 5.2 Review and compile all available information from reports, management/response plans, and literature on the potential effects of various Applied Response Technologies (ARTs) (such as dispersants) on sanctuary resources.

- A. Develop GFNMS policies and recommendations (e.g. potential monitoring protocols) regarding the use of ARTs in the event of an oil spill. Solicit input from the Vessel Spills Working Group, Sanctuary Advisory Council, emergency response agencies, and other applicable local, state, and federal trustee agencies.

STRATEGY VS-6: *Periodically review and revise, as necessary, GFNMS in-house emergency response plan.*

Activity 6.1 Revise tasks and responsibilities for GFNMS in the event of a vessel spill, both small and large, in the sanctuary (also see Administration recommendations).

- A. Participate in ACP drills and test in-house communication and response equipment including database connections and GIS mapping capabilities.
- B. Hold annual GFNMS meeting to provide refresher training on in-house emergency response plan and to ensure staff understands their individual roles in the event of a spill.

STRATEGY VS-7: *Continue to improve integration of GFNMS Beach Watch and ACCESS data into Area Contingency Plan.*

Activity 7.1 Enhance Integration of Beach Watch and ACCESS data into the ACP and Web-based GIS in the Southwest Environmental Response Management Application (ERMA). Regularly integrate updated GFNMS data to strengthen the ACP and ERMA and allow for more accurate decision making by incident command.

- A. GFNMS will participate in ACP meetings including meetings of the Wildlife Operations and Planning sub-committees.
- B. Provide Beach Watch and ACCESS data to incident command on a real-time basis, as needed, to inform decision making during a spill and to help assist any associated NRDA operations and ensure that data are also incorporated into ERMA.

STRATEGY VS-8: *Conduct outreach to mariners to increase stewardship of the sanctuary, including voluntary compliance with Vessel Traffic System (VTS) and sanctuary regulations.*

Activity 8.1 Develop outreach plan based on results of vessel activities profile, risk assessment, and resources-at-risk assessment to increase voluntary compliance with VTS and sanctuary regulations (container ships, bulk carriers, chemical carriers, military vessels, research vessels, cruise ships, and tugs).

- A. Ensure GFNMS regulations are listed accurately in the *Coast Pilot*. Update as needed.
- B. Review vessel activities profile, risk assessment, and resources-at-risk assessment and identify high-risk vessels and circumstances (target audiences).
- C. Identify pathways for reaching target audiences.
- D. Develop and distribute appropriate materials and programs.

STRATEGY VS-9: *Increase regular communication between GFNMS and maritime trade industry.*

Activity 9.1 Recruit maritime trade industry member for GFNMS Advisory Council. The maritime trade council member would represent the industry's interest at the sanctuary advisory council meetings and report sanctuary activities to the industry.

STRATEGY VS-10: *Participate in regional forums for addressing vessel traffic issues.*

Activity 10.1 A sanctuary representative will attend regional meetings, including the area committee meetings, harbor safety meetings, and ad hoc panels. Sanctuary participation will include, but not be limited to:

- A. Provide information for the geographic response plans.
- B. Participate in discussion on use of dispersants.
- C. Develop a strategy diagram for all sensitive areas as a part of ERMA and regional monitoring programs such as ACCESS.

- D. Conduct outreach to appropriate local, state, and federal agencies and political representatives to discuss boater insurance and liability issues.

STRATEGY VS-11: *Continue to implement recommendations of the vessel spills working group and seek regular input from the sanctuary advisory council.*

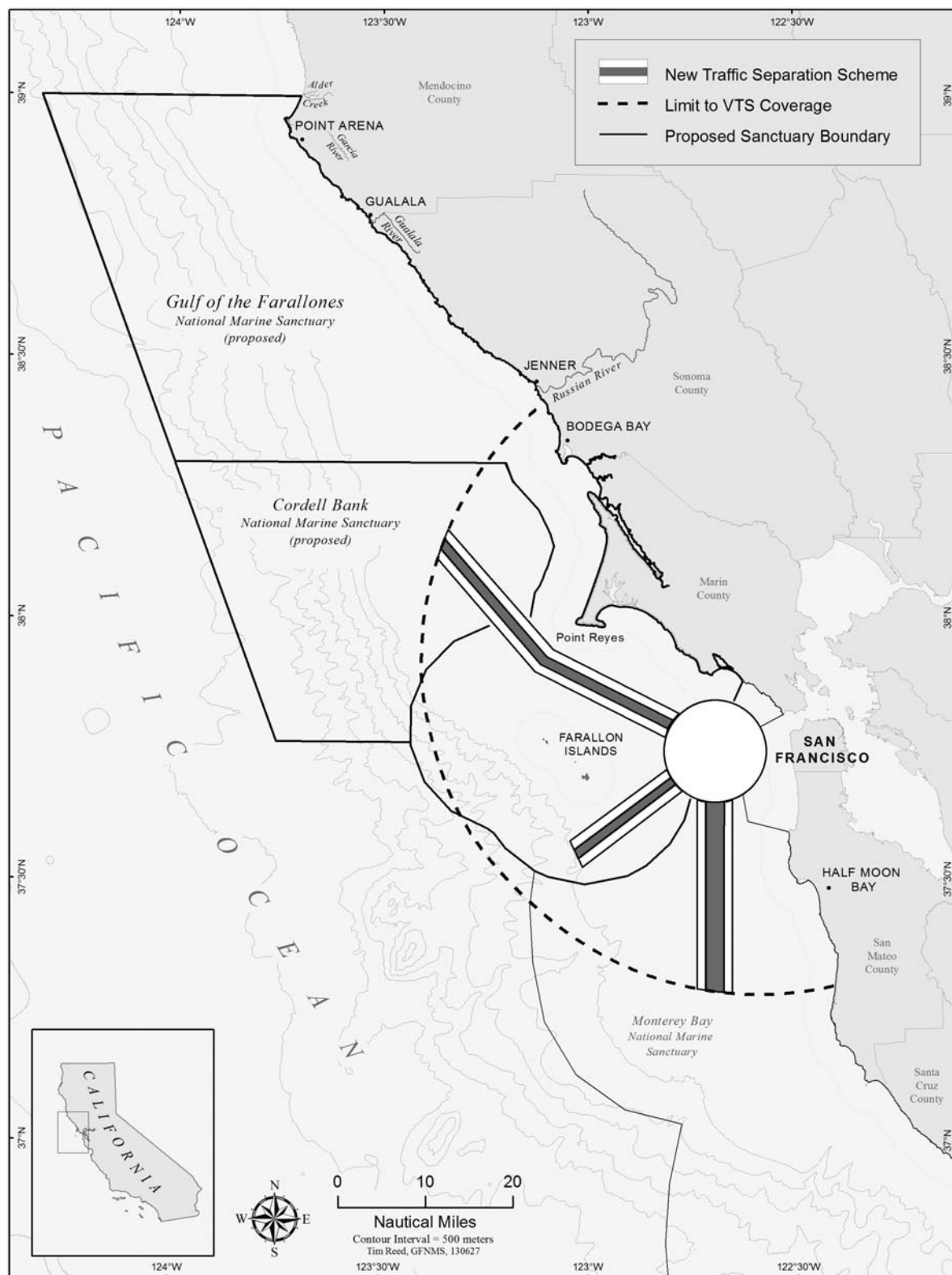
Potential Partners:

Federal: National Park Service (NPS), US Coast Guard (USCG), National Oceanic and Atmospheric Administration (NOAA) modelers/Office of Response and Restoration (ORR), Emergency Response Division (ERD), National Ocean Service (NOS) charting, NOAA Scientific Support Coordinator, United States Geological Survey (USGS), NOAA Coastal Services Center, Office of National Marine Sanctuaries (ONMS), NOAA Coast Survey, NOAA Scientific Support Coordinator, US Fish and Wildlife Service (USFWS), NOAA Office of Response and Restoration (ORR), National Centers for Coastal Ocean Science (NCCOS), Bureau of Ocean Energy Management (BOEM), National Marine Fisheries Service (NMFS), National Oceanographic Data Center (NODC), MBNMS/Sanctuary Integrated Monitoring Network (SIMoN)

State & County: California Department of Boating and Waterways (CDBW), CA Office of Spill Response (OSPR), California Coastal Conservancy, CA Department of Fish & Wildlife (CDFW), California Department of Boating and Waterways (CDBW) (licensing info), California Coastal Commission (CCC), Central California Ocean Observing Systems (CeNCOOS), SF Harbor Safety Committee, Moss Landing Marine Laboratories (MLML), Bodega Marine Laboratory (BML), San Francisco State University (SFSU)

Other: Farallones Marine Sanctuary Association (FMSA), Fleet Numerical, Maritime trade industry, fishing industry, Monterey Bay Aquarium Research Institute (MBARI), Scripps Institute of Oceanography, Point Blue Conservation Science, The Marine Mammal Center (TMMC), Glen Ford Consulting, Marine Exchange, Port of Oakland, Port of San Francisco, Marine Mammal Commission, Coast Guard Auxiliary, California Academy of Sciences (CAS), Oiled Wildlife Care Network, (OWCN), Center for Integrated Marine Technology (CIMT), Regional Response Team, Area Committee, Harbor Safety Committee

Vessel Traffic Lanes Map



Impacts from Vessel Spills Action Plan
GFNMS Draft Management Plan

GFNMS IMPACTS FROM VESSEL SPILLS

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY VS-1: Expand MBNMS drift analysis model north to Point Arena/Mendocino using existing data. STRATEGY VS-2: Refine spill and drift model to increase accuracy of risk assessments. STRATEGY VS-3: Evaluate recent vessel routing changes .	Minimize the risk to GFNMS' natural resources from spills, while allowing for the continuation of safe, efficient and environmentally sound transportation.	Assess level of risk and determine whether improvements can be made to reduce risk.	Increase understanding of worst case scenario in the event of a vessel collision or grounding, based on understanding oceanographic processes and response time.	1) Complete evaluation of potential risks to GFNMS from transiting vessels by understanding: a) Vessel activity profile b) Causal events c) Spill and drift model 2) Use risk analysis as a management decision making tool to take action to minimize risk and potential impacts on sanctuary resources.	Sanctuary Superintendent, Ecosystem Protection Coordinator, Research Coordinator	1) Updated and expanded drift analysis model 2) Vessel activities profile 3) Risk assessment report
STRATEGY VS-4: Track distribution and numbers of species of concern and habitat in relation to probable spill trajectories.	Minimize the risk to GFNMS' natural resources from spills, while allowing for the continuation of safe, efficient and environmentally sound transportation.	Develop long-term monitoring programs within GFNMS to identify trends and take proactive measures to reduce risk from vessel spills.	Increase understanding of sensitive habitats and species to receive priority protective measures during a vessel spill event. Assess impacts from low level chronic oil pollution.	Continually update Resources at Risk Model for GFNMS and integrate information into Area Contingency Plan (as revised every five years).	Sanctuary Superintendent, Research Coordinator, Ecosystem Protection Coordinator	1) Update model, and Report C 2) Regular maps depicting distribution and abundance of sentinel species and vessel type and activity

Impacts from Vessel Spills Action Plan
GFNMS Draft Management Plan

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY VS-5: Participate in Area Contingency Planning and engage in NMSA consultation during the revision of the ACPs in the region to address risks to sanctuary resources. STRATEGY VS-6: Revise GFNMS in-house emergency response plan. STRATEGY VS-7: Continue to improve integration of Beach Watch and SEA Surveys data into Area Contingency Plan and Southwest ERMA.	Minimize the risk to GFNMS' natural resources from spills, while allowing for the continuation of safe, efficient and environmentally sound transportation.	Review current response programs and identify areas of improvement, focusing on GFNMS resources at risk.	Increase effectiveness in responding to an emergency spill in order to reduce impacts on sanctuary resources.	1) Build into the Area Contingency Plan specific strategies to increase probability of protection of sanctuary resources during a catastrophic event. On an annual basis review, and as appropriate, revise GFNMS in-house plan. 2) Provide on-going training and practice drills for staff. 3) Provide regular updates of GFNMS data and information to Southwest ERMA and as needed to ICP.	Sanctuary Superintendent, Research Coordinator, Ecosystem Protection Coordinator	1) Technical data summary 2) Peer reviewed articles 3) ACP post-drill report



PROGRAM AREA ACTION PLANS

GFNMS DRAFT MANAGEMENT PLAN

- I. Education and Outreach**
- II. Conservation Science**
- III. Resource Protection**
- IV. Administration**



EDUCATION AND OUTREACH ACTION PLAN

PROGRAM STATEMENT

Gulf of the Farallones National Marine Sanctuary (GFNMS) requires a long-term strategy to fulfill the over-arching education goal of the sanctuary, which is: “to educate and engage residents and visitors in the Gulf of the Farallones National Marine Sanctuary watersheds about their connection to the sanctuary and to develop a sense of personal responsibility to protect the marine environment.”

PROGRAM DESCRIPTION

Education programs are designed to enhance public awareness, understanding and appreciation of the sanctuary and its resources, and build stewards to take on the responsibility of protecting these special places. Our education programs are in direct alignment with the ONMS education vision and mission.

ONMS Education Vision: An ocean-literate public making informed environmental decisions.

ONMS Education Mission: To inspire ocean and climate literacy and conservation through National Marine Sanctuaries.

The development of effective and coordinated education programs is a priority for all national marine sanctuaries. GFNMS has developed a long-term education strategy to raise the public’s awareness of the local and regional marine environment and how they can become involved in the sanctuaries. These education programs complement the sanctuary’s broad-based community outreach efforts by focusing on targeted audiences such as students, teachers, families, adults and youth. GFNMS and Cordell Bank National Marine Sanctuary (CBNMS) will collaborate to service common audiences.

The Farallones Marine Sanctuary Association (FMSA) works collaboratively with GFNMS to implement education, interpretation, and volunteer programs. GFNMS, in cooperation with FMSA, sponsors student classroom and field programs, teacher trainings, summer camps, public lectures and excursions, family workshops and other education programs. FMSA and GFNMS are developing and implementing a comprehensive K-12 program that includes field-work, trips and classroom activities as well as multicultural programs with the San Francisco Recreation and Parks Department. GFNMS will expand its partnerships and develop additional working relationships with other government agencies, institutions, and organizations.

GFNMS uses education as a resource management tool to address specific priority ecosystem protection issues identified during the management plan review process. Education is essential to achieving many of the sanctuary's management objectives. In addition, education is used to both complement and promote other sanctuary programs such as research, monitoring, and enforcement by communicating information about these programs.

EDUCATION AND OUTREACH GOALS

1. Use education as a management tool to help protect the sanctuary's habitats, wildlife and cultural resources.
2. Ensure that education complements and promotes other sanctuary programs such as research, monitoring, enforcement and resource protection.
3. Continually reach broader audiences to create an ocean literate, informed and connected public.

EDUCATION AND OUTREACH OBJECTIVES

1. Address critical human impact issues to habitats, wildlife and cultural resources by developing education and outreach programs that involve sanctuary research, resource protection and education programs, to communicate to key users how to lessen their impacts.
2. Develop all education programs with input from sanctuary research, resource protection and monitoring programs to promote ocean literacy.
3. Expand and increase strategic partnerships to continually reach and engage diverse and new audiences.

EDUCATION AND OUTREACH ACTION PLAN

SCHOOL PROGRAMS - To connect the next generation of scientists, managers, educators and leaders with the ocean's influence on them and their influence on the ocean

STRATEGY ED-1: *Educate K-8 students about the sanctuary through visitor center, classroom, and field activities.*

Activity 1.1 Update K-8 Crissy Field visitor center programs to align with state and national science standards. Expand to include national ocean and climate literacy principles. Develop activities that incorporate emerging marine issues and correlate to school curricula.

- A. Develop theme-based field trip programs for specific grade levels that correlate to ocean and climate literacy principles and science standards.

- B. Develop outreach programs targeting a diverse cross section of elementary schools. These programs will incorporate hands-on activities, emerging sanctuary issues and teachers' needs.

STRATEGY ED-2: *Educate high school students and teachers about the sanctuary through classroom and field activities.*

Activity 2.1 Expand LiMPETS (Long-term Monitoring Program & Experiential Training for Students) Program to a four-tiered program including curriculum, student monitoring, stewardship projects, and teacher professional development.

- A. Continue high school sandy beach and rocky intertidal monitoring program by incorporating newly developed techniques based on new science standards.
- B. Expand high school program to include a stewardship component in which students volunteer for the sanctuary as a part of Education STRATEGY ED-5.
- C. Develop a water quality, introduced species, and climate change component of the LiMPETS programming, including curricula and monitoring, in collaboration with other West Coast sanctuaries.
- D. Increase enrollment by working to reach a broader, more diverse audience by targeting multiple school districts in San Francisco, San Mateo and Marin Counties.

STRATEGY ED-3: Educate culturally diverse inner city children about the sanctuary through summer camp experiences that are highly experiential and field based.

Activity 3.1 Expand Sanctuary Explorers Camp to reach a broader audience.

- A. Increase capacity and duration of the camp program by incrementally expanding the camp to six weeks with simultaneous sessions to reach a broader audience.
- B. Adapt curriculum to increase stewardship ethic by providing examples for how students may become more involved in sanctuary activities.
- C. Include high school LiMPETS Program students as camp counselors to ensure a continuum of sanctuary experiential learning opportunities.

- D. Incorporate Crissy Field visitor center and other Bay Area summer programs into the Visitor Center Field Trip Program.

STRATEGY ED-4: Educate teachers about the resources and programs of the sanctuary by providing professional development programs.

Activity 4.1 As a component of the education program, develop a set of professional development programs for teachers.

- A. Invite teachers to biannual research symposium to learn about sanctuary research activities.
- B. Participate in local, regional and national teacher development venues. As part of this attendance, develop a series of K-12 teacher workshops that provide participants with classroom activities and introduce them to sanctuary programs. Possible venues include: The Presidio Teachers Night; County Math and Science Council conferences; CSTA (California Science Teachers Association); NSTA (National Science Teachers Association); NMEA (National Marine Educators Association); NAEE (National Association of Environmental Education); NAI (National Association of Interpretation).
- C. Utilize volunteer corps to maintain GFNMS resource center to make it accessible to sanctuary constituents such as teachers, other volunteers, students, staff, and partners. Resource center contents include classroom lending kits, marine-related books, PowerPoint shows, videos, and research library. Develop a marketing plan and check-out system for center use.

STEWARDSHIP – To involve the community in understanding their relationship to the ocean and in caring for its future

STRATEGY ED-5: Provide stewardship opportunities for high school students.

Activity 5.1 Develop GFNMS high school volunteer internship program.

- A. Recruit students in grades 10-12 from local and regional high school education programs to volunteer for summer camp, the visitor center, field research, volunteer program, and other opportunities.

STRATEGY ED-6: Create stewards of the sanctuary by engaging middle and high school students in a large-scale, long-term monitoring project.

Activity 6.1 Participate in LiMPETS, a collaborative program of the West Coast sanctuaries to work with teachers and students to learn how to collect long-term monitoring data while increasing awareness of the sanctuaries.

- A. Implement teacher workshops to increase the number of teachers who teach LiMPETS monitoring protocols to their middle and high school students. These workshops can be

hosted in conjunction with Cordell Bank, Monterey Bay, and Channel Islands National Marine Sanctuaries.

- B. Maintain network of teachers and students to support their monitoring efforts.
- C. Maintain online databases as part of the overall LiMPETS network protocol.
- D. Expand monitoring program to include other key species and/or habitats.

VOLUNTEER PROGRAMS – To offer experiences to inspire an ocean conservation ethic

STRATEGY ED-7: *Expand the reach of GFNMS education and outreach programs by enhancing volunteer program training to foster volunteers to educate about the sanctuary at various events and locations.*

Activity 7.1 Recruit, train, and manage a diverse team of volunteers to engage and educate visitors about the sanctuary at the GFNMS visitor center, summer camps, schools, and outreach events (lectures, fairs) as well as in the field at high use areas.

- A. Maintain and grow program for training volunteer naturalists to lead sanctuary programs at the visitor center and schools.
- B. Maintain and grow the Rocky Intertidal Stewardship program at Duxbury Reef to be a collaboration with the California Academy of Sciences and LiMPETS and be replicated at strategic rocky reefs in the sanctuaries, such as Pillar Point Reef.
- C. Develop a speakers' bureau to provide sanctuary trained speakers for schools and community groups on sanctuary related topics.
- D. Maintain and grow program for training volunteers to represent the sanctuary at outreach fairs and events.
- E. Train staff and docents to work successfully with diverse and multicultural audiences by providing cultural sensitivity training and multilingual materials appropriate for each audience.

Activity 7.2 Develop GFNMS naturalist certification program to train volunteers and professional naturalists to present basic sanctuary information to multiple audiences.

Education and Outreach Action Plan
GFNMS Draft Management Plan

- A. Train professional naturalists on sanctuary-specific information and certify them as sanctuary Certified Naturalists.
- B. Train and certify volunteers and staff of other marine interpretation organizations as sanctuary Certified Naturalists.

PUBLIC PROGRAMS – To instill greater public understanding of our dependence upon a healthy ocean ecosystem and how the sanctuary is an integral part of that system.

STRATEGY ED-8: *Increase awareness and knowledge of the sanctuary through a lecture series.*

Activity 8.1- Raise the profile of the GFNMS lecture series by working to increase attendance by expanding to target new potential audiences.

- A. Increase collaboration with partners by developing a list of targeted potential locations based on attendance. Then work with the targeted partner to host the invited speakers for an overall larger reach.
- B. Increase effective use of media and press by tracking which venues program participants use to find their information on sanctuary events.
- C. Hold lectures in new and diverse communities not already reached (e.g., East Bay, Bodega Bay).
- D. Investigate potential sponsorship possibilities..

STRATEGY ED-9: *Increase awareness and build knowledge of the sanctuary through educational programs and exhibits at the Sanctuary and partner visitor centers.*

Activity 9.1 Maintain engaging educational exhibits and activities at the GFNMS Crissy Field visitor center and partner exhibits.

- A. Improve and expand visitor center exhibits. This will include renovating existing exhibits and creating new exhibits and activities based on sanctuary cultural resources, habitats and wildlife, and ecosystem protection.
- B. Continue scheduled drop-in programs such as “Creature Feature” to attract new and return visitors. These programs will be scheduled during high visitation periods (summer, holidays, weekends).
- C. Increase attendance at the Crissy Field visitor center by marketing its programs and services in conjunction with the Crissy Field Environmental Center. As part of this marketing plan, ensure that the drop in visitor activity schedule is coordinated at both sites.

STRATEGY ED-10: *Increase sanctuary awareness and reach to larger audiences through the production and distribution of videos on the sanctuary and its resources.*

Activity 10.1 Complete production of a general video and distribute to appropriate audiences.

- A. Finalize script(s) and explore possibility of generating two cuts—one targeted to a general audience (7th grade and above), and one for children (7th grade and below).
- B. Develop distribution and marketing plan to reach desired audiences across the region and state such as environmental education centers and county offices of education.

STRATEGY ED-11: *Increase awareness of GFNMS by using effective media and marketing techniques.*

Activity 11.1 Implement awareness campaign to raise the profile and recognition of the GFNMS.

- A. Internally develop new image, messages, and determine targeted diverse audiences. Designate a media/public affairs point of contact to maintain campaign outcomes.
- B. Utilize marketing in television, radio, print and online media based on audience needs.
- C. Establish relationships with key local reporters (collaboratively with MBNMS and CBNMS, where media markets overlap) and develop talking points for press releases.
- D. Identify key publications for sanctuary articles.
- E. Develop media plan and release schedule.
- F. Develop best practices (including logo and web site) for all publications, online and printed materials.
- G. Develop shared outreach materials/products/programs with CBNMS and MBNMS based on established priorities that inspire stewardship.

Activity 11.2 Increase reach and success of all sanctuary programs by increasing distribution of GFNMS education and outreach messages through other environmental education groups.

- A. Increase GFNMS brochure and flyer distribution list to include online listservs, newsletters and blogs. Target specific groups including: Students and Teachers Restoring a Watershed (STRAW), Marine Activities, Resources, and Education (MARE), Point Reyes National Seashore Association (PRNSA), California State Parks, County Parks, The Marine Mammal Center (TMMC), Crissy Field Environmental Center, Nature Bridge and GGNRA.

- B. Work individually with partners (including those listed above) to incorporate sanctuary messages into their materials/programs and vice versa. Prioritize organizations and aim for two collaborations per year.

Activity 11.3 Increase reach and success of all sanctuary programs by effectively marketing, distributing, and evaluating all sanctuary programs and products.

- A. Develop strategy for marketing, distributing, and evaluating existing and new programs and products.

STRATEGY ED-12: *Increase audience by building a larger visitor center with increased exhibits, programs, and opportunities to learn about and support GFNMS.*

Activity 12.1 Create a new visitor center that showcases the Office of National Marine Sanctuary (ONMS) with exhibits, lecture hall, and classroom/lab facilities, providing a gateway to the GFNMS and beyond. The center will be a destination for greater ocean literacy and community stewardship in the 21st century. See AD-1 for list of potential sites.

STRATEGY ED-13: *Increase awareness of the sanctuary through interpretive signage and exhibits at strategic locations.*

Activity 13.1 Develop a coordinated network of signs and exhibits throughout the sanctuary.

- A. Install and maintain interpretive signs at strategic locations along the coast including sites of high traffic and high educational value.
- B. Incorporate sanctuary exhibits into visitor centers and museums along the coast.
- C. Develop a sanctuary multi-use and/or vehicular trail along the coast linking signs, wayside exhibits, museum exhibits, and interactive kiosks.
- D. Coordinate and collaborate with CBNMS and MBNMS on sanctuary-sponsored signage and visitor center displays along the coast.

STRATEGY ED-14: *Outreach to residents and visitors in inland areas of the GFNMS watersheds and educate them about their connection with the sanctuary.*

Activity 14.1 Develop a traveling exhibit on sanctuary watersheds to bring the sanctuary to inland communities.

- A. Develop storyboard and exhibit plan featuring the connection between inhabitants of watersheds and the GFNMS. Contact potential venues for guidance on sizes and content (including curriculum needs). Potential venues include schools, libraries, and community locations in the Bay Area and Central Valley.

- B. Develop curriculum and/or activities related to exhibit.
- C. Build and circulate exhibit and curriculum around the Bay Area. Particular focus may be placed on the exhibit during Oceans week.

Potential Partners:

Federal: National Park Service (NPS), Point Reyes National Seashore (PRNS), Golden Gate National Recreation Area (GGNRA), Cordell Bank National Marine Sanctuary (CBNMS), Olympic Coast National Marine Sanctuary (OCNMS), Monterey Bay National Marine Sanctuary (MBNMS), Channel Islands National Marine Sanctuary (CINMS), Sanctuary Advisory Council, The Presidio Trust, United States Fish and Wildlife Service (USFWS), Bureau of Land Management

State & County: California Department of Fish and Wildlife (CDFW), California State Parks, SF Bay Conservation and Development Commission, county Parks, CA Coastal Conservancy, San Francisco Recreation and Parks Department, University of California Santa Cruz (UCSC), Bodega Marine Laboratory (BML)

Other: Farallones Marine Sanctuary Association (FMSA), Crissy Field Environmental Center, Fitzgerald Marine Reserve, Audubon Canyon Ranch (ACR), Stewards of the Coast and Redwoods, California Academy of Sciences (CAS), Randall Museum, Aquarium of the Bay, Oceanic Society, Ocean Conservancy, Point Blue Conservation Science, California Coastal Trail, Green Belt Alliance, Oakland Museum, Maritime Museum, Aquarium of the Bay, The Bay Model, Exploratorium, PRNSA, Marine Activities, Resources, and Education (MARE), Bay Area Science Alliance (BASA), Southwest Marine and Aquatic Educator's Association (SWMEA), Environmental Education Council of Marin (EECOM), city visitor centers, chambers of commerce, Convention Bureau, TV, radio, print and online media, Libraries, community centers, other Bay Area marine science education organizations, teachers, local research institutions, Bay Area schools, other marine interpretation organizations

Education and Outreach Action Plan
GFNMS Draft Management Plan

GFNMS EDUCATION AND OUTREACH

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY ED-1: Educate K-8 students about the sanctuary. STRATEGY ED-2: Educate high school students about the sanctuary. STRATEGY ED-3: Educate diverse inner city children about the sanctuary. STRATEGY ED-4: Educate teachers about the sanctuary.	Use education as a tool to help protect the sanctuary's resources.	1) Structure programs to educate along an environmental literacy continuum including developing awareness, building a knowledge base, changing behavior, and building stewardship. 2) To target diverse audiences including various multicultural, socio-economic, age, and gender groups.	Increase number and diversity of students and teachers exposed to messages about the sanctuary in an effort to increase awareness about sanctuary resources and issues.	1) Track numbers of children reached in K-8 programs. 2) Track number of youth reached in high school programs. 3) Track number of children reached through summer camp program. 4) Evaluate increase in students' knowledge about the sanctuary.	Sanctuary Superintendent, Education Coordinator, FMSA	1) K-8 program and resources, elementary school outreach plan 2) High school curriculum, website, database, workshops, outreach materials, slide shows, teacher lending kits 3) Summer camp curriculum 4) Assessment and evaluation
STRATEGY ED-5: Provide stewardship opportunities for high school students. STRATEGY ED-6: Create stewards by engaging middle and high school students in monitoring.	Use education as a tool to help protect the sanctuary's resources.	Structure programs to educate along an environmental literacy continuum including developing awareness, building a knowledge base, changing behavior, and building stewardship.	Increase in effectiveness of high school education programs whereby the literacy continuum is fully realized from awareness building to stewardship building.	1) Track increase in number of high school students participating in internship program. 2) Track increase in number of high school students participating in high school monitoring programs. 3) Track student-directed stewardship projects implemented.	Sanctuary Superintendent, Education Coordinator, FMSA	1) Formal framework for internship program including training materials, and evaluation standards 2) Case studies of student-directed stewardship projects

Education and Outreach Action Plan
GFNMS Draft Management Plan

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY ED-7: Expand the reach of GFNMS education and outreach expanding volunteer program	Continually reach broader audiences to create an informed and connected public.	Target diverse audiences including various multicultural, socioeconomic, age and gender groups.	Expand outreach programs throughout region, through diverse venues, to increase the general public's awareness about the sanctuary, and increase sanctuary stewardship.	1) Increase in number and diversity of volunteers trained through the Sanctuary Naturalist Corps and actively participating in outreach, monitoring, and restoration efforts (in hours). 2) Measurable increase in types and locations of venues used for delivering sanctuary messages.	Sanctuary Superintendent, Education Coordinator, FMSA	1) Training manual and program for volunteers 2) Outreach materials to be disseminated to public
STRATEGY ED-8: Increase awareness through a lecture series. STRATEGY ED-9: Increase awareness through educational programs and exhibits at the visitor center STRATEGY ED-10: Increase awareness through video. STRATEGY ED-11: Increase awareness through effective media and marketing. STRATEGY ED-12: Increase audience by building larger visitor center. STRATEGY ED-13: Increase awareness through interpretive signage and exhibits.	a) Continually reach broader audiences to create an informed and connected public. b) Ensure education complements and promotes other sanctuary programs such as research, monitoring and resource protection.	a) Target diverse audiences including various multicultural, socioeconomic, age and gender groups. b) To develop programs to target content builders, user/impact groups, influencers, and decision makers.	Target new audiences and increase participation in sanctuary programs in order to raise the profile and recognition of GFNMS within the broader region.	Increase the reach and success of all sanctuary programs by developing an overall marketing strategy, distribution plan, and evaluation of all sanctuary products and programs. Marketing plan directed at: 1) increasing number of tools used to reach different audiences and interest groups. 2) increasing attendance in sanctuary programs 3) increasing press coverage of the sanctuary.	Sanctuary Superintendent, Education Coordinator, FMSA	1) Outreach materials 2) Exhibits, touch tank 3) Video, marketing materials 4) Public service announcements, press releases, ad campaign, outreach materials



CONSERVATION SCIENCE ACTION PLAN

PROGRAM STATEMENT

Characterization, monitoring, and research assist in the protection of sanctuary wildlife and habitats by increasing the understanding of ecosystem structure and function; detecting environmental problems; tracking ecosystem health and trends of the various habitats and natural resources in the sanctuary; and contributing to solutions to management issues throughout the Gulf of the Farallones National Marine Sanctuary (GFNMS). An updated long-term conservation science plan has been developed to coordinate current and future habitat characterization, ecosystem monitoring, and research efforts. The following three specific areas are the focus of the conservation science plan: (1) baseline and characterization studies for populations and habitats whose presence were critical in the sanctuary's designation, yet whose distributions and other basic characteristics remain poorly understood; (2) directed monitoring studies focusing on indicator species and representative habitats and undertaken jointly with other sanctuaries, research institutions and agencies; and (3) analytical studies aimed at determining the cause of a condition or impacts and predictive studies to understand trends and variability (e.g., in a specific population).

PROGRAM DESCRIPTION

GFNMS manages a complex region with high biological diversity; nationally significant wildlife breeding and feeding areas; significant commercial and recreational fishing; estuarine habitats; numerous federally, state, and locally protected marine and estuarine waters; and watershed influences and impacts from the eight million San Francisco Bay Area residents. Conservation science will help address specific management problems, enhance resource protection efforts, and assist in bringing scientific information to the general public. The conservation science program will ensure that science activities address management issues and are effectively integrated into the administration, management, education, outreach and resource protection programs of the sanctuary.

CONSERVATION SCIENCE GOALS

1. Increase our knowledge and understanding of the estuarine, nearshore, and offshore ecosystems in the sanctuary.
2. Develop monitoring programs to understand long-term status and trends, detect emerging issues, and guide management decisions.

3. Develop research programs to identify and address specific management issues and assess effectiveness of management solutions.

CONSERVATION SCIENCE OBJECTIVES

1. Assess the sanctuary's information base to identify gaps in knowledge that can affect our ability to manage the area.
2. Conduct studies of species or marine communities to identify wildlife and habitats most at risk or in need of management attention.
3. Promote the sanctuary as a site for ecosystem-based management research by providing financial and logistical support for scientific investigations that address critical marine ecosystem protection issues.
4. Design research and monitoring projects that are responsive to management concerns and contribute to improved management of the sanctuary.
5. Make effective use of research and monitoring results by incorporating them into education and resource protection programs.
6. Encourage information exchange and cooperation among all organizations and agencies undertaking ecosystem-based research in the sanctuaries to promote more timely and informed management.

CURRENT CONSERVATION SCIENCE PROGRAM

The sanctuary's conservation science program consists of several ecosystem monitoring projects, issue specific research projects, and habitat characterization projects. The monitoring programs, Sanctuary Ecosystem Assessment Surveys (SEAS), are a compilation of GFNMS programs that provide biological observations and habitat characterization for the Gulf of the Farallones region. SEAS include several long-term monitoring programs such as Beach Watch, Applied California Current Ecosystem Surveys (ACCESS), and Rocky Intertidal Monitoring. SEAS will also include future monitoring and exploration programs such as invasive species detection, restoration, and monitoring; estuarine monitoring; water quality monitoring through assessment of indicator species for ecosystem health; and the status and trends of species populations and ranges in the Gulf of the Farallones as indicators of impacts from global climate change.

SEAS—Beach Watch volunteers have been monitoring coastal marine life (alive and dead) and human activities along the sanctuary shoreline continuously since 1993. Beach Watch collects baseline data on sanctuary wildlife and maintains a long-term database used by the sanctuary and other natural resource management agencies to answer management questions.

SEAS—Rocky Intertidal Program monitors species abundance and distribution within several locations throughout the sanctuary, and spatial-temporal changes within the rocky intertidal habitat.

Dedicated research projects in the past have included efforts to assess wildlife disturbance levels from permitted overflights and advise management on the effectiveness of special conditions required in sanctuary permits. Another example of a past dedicated research project is the assessment of human activities upon three harbor seal haul-outs. This six-year project, called Sanctuary Education, Awareness and Long-term Stewardship (SEALS), categorized and quantified human activities near the seal haul-outs and provided recommendations for approach distances. This information was later incorporated into various outreach products and docent programs, aided National Marine Fisheries Service investigating violations to the Marine Mammal Protection Act, and informed U.S. Fish and Wildlife Service during development of new refuge boundaries and regulations. Past habitat characterization efforts included the production of the Biogeographic Atlas, a compilation of maps and analyses to identify areas of highest ecological importance in sanctuary offshore areas, side-scan sonar and multibeam mapping and video-documentation of benthic resources around the South Farallon Islands, Fanny Shoal, Rittenburg Bank, Cochrane Bank, Farallon Escarpment, and Drakes Bay, and characterization of oceanographic features through the use of thermistor arrays and ACCESS underway data collection.

Since 1997, Gulf of the Farallones has conducted at-sea monitoring for birds, mammals, turtles, and vessel activities, through various projects similar to ACCESS. ACCESS is a long-term study that focuses on krill, a critical building block in the food chain for this area. Through the use of acoustics and sampling, krill and juvenile and schooling fish are located and identified. The parameters influencing their distribution in the water column are investigated. These data are analyzed along with oceanographic parameters, chlorophyll, seabird, and marine mammal sightings to better understand the causes and dynamics of marine life concentrations in particular areas of the sanctuary.

Information and products from current and future science programs contribute to the understanding of sanctuary wildlife and habitats and how they are influenced by anthropogenic stressors such as oil pollution, climate change, noise, marine debris, and extraction. Science products also help to predict or model changes from natural phenomenon and human-induced stressors. Information from the Conservation Science program also contributes to outreach and educational materials used in handouts, classroom assignments and web-based products.

CONSERVATION SCIENCE STRATEGIES

STRATEGY CS-1: *Maintain the Beach Watch program to monitor marine life and human activities on sanctuary beaches, and provide baseline information, and identify ecosystem changes to assist sanctuary management decisions.*

Activity 1.1 Maintain Beach Watch volunteer monitoring program to gather baseline information about the resources of the sanctuary.

- A. Beach Watch is a long-term shoreline monitoring program. The Beach Watch program primarily assesses coastal birds, marine mammals, human activities, and oil pollution. The program goals are to: 1) educate the public about the coastal environment; 2) educate the public that they can make a difference in protecting their beaches; 3) assist GFNMS in the early detection of natural and human-caused environmental perturbations such as warm or cold water events and oil spills; 4) provide a baseline of information on the average presence of live and beachcast marine organisms; and 5) develop a network of local experts who can document and discuss the natural changes a specific beach will undergo over a period of several years. Beach Watch and similar west coast sanctuary monitoring programs will be integrated to produce data sets for tracking the health and status of west coast seabird and marine mammal populations.
- B. Revise and reprint beached bird book to support the efforts of Beach Watch, BeachCOMBERS in MBNMS and COASST volunteers in OCNMS by making available the most current information on identification and demographic information of beached birds and mammals.
- C. Integrate Beach Watch data with other biological and physical monitoring data sets such as ACCESS data sets, SEAS rocky intertidal monitoring, the state's North-Central Coast Marine Protected Areas monitoring through the Monitoring Enterprise, and future monitoring programs (introduced species and water quality). Make data applicable to and posted on the Southwest Environmental Response Management Application. Data should be available for access by staff during emergency response.
- D. Integrate Beach Watch data with regional and national Integrated Ocean Observation Efforts (IOOS) and Central and Northern California Ocean Observation System as well as West Coast Regional Monitoring Program and United States Fish and Wildlife Service (USFWS) seabird populations assessment, and harmful algal bloom events.
- E. Upgrade Beach Watch data management and availability by posting data sets on local and regional web sites such as Center for Integrated Marine Technologies (CIMT), (CICORE), the national data base for the Marine Mammal Stranding Network, and the Sanctuary Integrated Monitoring Network (SIMoN).
- F. Improve efficiency of data collection through the use of smart phones, digital imagery, and other electronic information gathering tools. Tools and programs shall be compatible

with those used by other shoreline monitoring programs, emergency response and injury assessment, National Marine Fisheries Service and US Fish and Wildlife Service.

STRATEGY CS-2: Conduct research as needed, to guide permit conditions.

Activity 2.1 Conduct research to guide permit conditions for white shark viewing and assess effectiveness of regulations.

- A. Develop and implement a white shark behavioral study to assess the impacts of motorized vessels in the vicinity of feeding and milling sharks. Study will assess shark behavior in relation to numbers of vessels and approach distances during various shark predator-prey interactions. Study analysis shall be targeted to recommend acceptable number of vessels, vessel size(s), and approach distances. Study will be conducted August through January during the seasonal migration of sharks to the Farallon Islands.
- B. Periodically review effectiveness of special permit conditions and revise as appropriate.

STRATEGY CS-3: Host a biennial research workshop to facilitate information exchange in the GFNMS.

Activity 3.1 Every other year, the sanctuary will continue to host a conservation science workshop with local researchers and educators to highlight science in and around the sanctuary.

- A. Host workshop every other year. Workshop proceedings will include oral presentations, poster sessions, and publication of proceedings and abstracts.
- B. Compile a comprehensive list of research being conducted in and around the sanctuary. Produce map of sampling locations and study areas.
- C. Educate research community how to post monitoring program descriptions and findings on to GFNMS SIMoN, OceanObs, SEAMAP, CICORE and other appropriate web sites.

STRATEGY CS-4: Develop and implement sanctuary ecosystem assessment and monitoring programs, and integrate with regional ocean observation programs along the west coast and the sanctuary program's System Wide Monitoring guidelines.

Activity 4.1 Expand ACCESS.

- A. Conduct long-term monitoring of the macrovertebrates of the sanctuary, seabirds, marine mammals, and sea turtles and their prey species. Monitor the abundance and distribution of species impacted by chronic and acute oil pollution, such as seabirds, marine mammals, and sea turtles, and their trophic relationship and the population dynamics of euphausiid shrimp or krill.

- B. Investigate the relationship between hydrographic conditions, physical features and the distribution and abundance of marine organisms in the vicinity of the Gulf of the Farallones region and the coastal and pelagic region west of Sonoma County.
- C. Link local abundance and distribution data sets with associated habitats, oceanographic features, and occurrence and distribution of human activities, such as vessel activities.
- D. Monitor phytoplankton for detection of harmful algal blooms.
- E. Identify and map specific and trend information for identification of areas of ecological significance and changes of ranges as potential indicators of global warming.

Activity 4.2 Expand sanctuary's Rocky Intertidal Monitoring Program. The rocky intertidal habitat of the sanctuary is limited to outer coast and island shorelines. This habitat is subjected to extraction, trampling impacts from humans and wildlife, smothering and scouring from natural and human-induced erosion factors, permanent destruction from vessel groundings, loss of acreage from non-native species, and impacts from pollutants such as urban run-off and vessel spills. Restoration of the rocky intertidal habitat is difficult and time-consuming, with projects often taking from seven to ten years.

- A. Continue monitoring of the rocky intertidal areas of the Farallon Islands and re-establish long-term monitoring of six mainland monitoring sites: Bodega Head, Pinnacle Rock, Estero Americano, Duxbury Reef, Slide Ranch, Bean Hollow and Pigeon Point and along the Sonoma and southern Mendocino coasts. The objectives are to: 1) establish non-destructive, permanent sampling transects, quadrats and density plots within the intertidal areas of the GFNMS; 2) determine native and introduced species inventory in the intertidal communities; 3) determine primary and secondary cover in established quadrats; 4) determine percent cover of sessile organisms; 5) determine density of macroinvertebrates susceptible to oil spill injury; 6) photo-document, collect and archive voucher specimens from the intertidal areas for future reference. Through regular assessment (monitoring) of the condition and health of this sensitive habitat, sanctuary staff can detect acute changes and long-term trends. Monitoring information can also indicate if a management action is effective and having positive results.
- B. Integrate monitoring protocols and data sets with CeNCOOS, West Coast Observations – Sanctuary Ecosystem Assessment Stations, , Multi-agency Rocky Intertidal Network (MARINe), Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), and the National Park Service. Provide data sets and integrated analyses to the State's Marine Life Protection Act Initiative, marine protected areas.
- C. Provide species inventory updates and integrate with introduced species detection programs.

Activity 4.3 Long-term monitoring of sanctuary physical/oceanographic processes

- A. Reestablish West Coast Obs-Sanctuary Ecosystem Assessment Stations (SEA Stations). SEA Stations are nearshore and near-island buoy-instrumentation, customized for particular locations. SEA Stations measure environmental events that affect marine life. The stations measure physical processes that affect distribution, settlement, growth and reproduction of marine life. Arrays have been placed at areas of water mass convergence, areas of strong upwelling influence and high productivity, and also near rocky intertidal monitoring sites. Interannual and shorter-term upwelling and relaxation events have been shown to drive recruitment and movement of certain fish species. It is also likely that these events affect other wildlife, including keystone species. The GFNMS will reestablish three arrays to continuously measure water column temperature, providing information necessary to understand and track water mass movements that affect recruitment of key species to coastal habitats. The stations shall be located at: located at: Bodega Head, Southeast Farallon Island, and Pigeon Point. A fourth and fifth array shall be newly established at Double Point and Point Arena.
- B. Establish Cooperative Agreement with Bodega Bay Marine Lab for long-term maintenance and periodic replacement and upgrades to array hardware; data down loading and web posting; data interpretation and integration with biological assemblage data and ecological areas of significance.

Activity 4.4 Conduct research and monitoring to assess eelgrass beds

- A. Develop and implement an eelgrass status study to assess size, density, health, and species richness of eelgrass beds in Tomales Bay.
- B. Periodically review effectiveness of regulation. Assess size and location of management zones.

STRATEGY CS-5: *Complete characterization of sanctuary biological and physical features.*

Activity 5.1 Map sanctuary habitat types and bottom substrate. A habitat map will provide important baseline information for management including relative proportions of sanctuary habitats; the current state of sanctuary wildlife and habitats as a basis against which to measure future change; unique habitats; identify areas of ecological significance; and extent of injuries from anthropogenic stressors.

Activity 5.2 Identify and map seasonal and year round circulatory patterns for surface and subsurface currents. Relate circulatory patterns to abundance and distribution of flora and fauna. Characterizing and mapping local and regional circulatory patterns and influences is important because the sanctuary is located in one of the world's four major upwelling systems. The upwelling of nutrient-rich, deep ocean water supports a food-rich environment and promotes the growth of organisms at all levels of the marine food web. The interaction of major currents, wind, topography, and other factors create coastal upwelling in the spring and summer that

influences the biological productivity of the sanctuary. This process drives the productivity of the area by bringing cool, nutrient-rich waters from deep offshore to the sunlit inshore surface. Upwelling increases the productivity of surface waters by supporting large plankton blooms, the basis for the abundance of marine life in the sanctuary.

Activity 5.3 Characterize the soft and hard bottom epifaunal communities. Survey the surface biota and sediment characteristics, quantify estimates of abundance and distribution of epifauna, assess disturbance effects and marine debris, develop species list of invertebrates and epifaunal fish, and characterize cultural resources.

Activity 5.4 Integrate characterization, mapping and monitoring programs with regional ocean observation programs along the west coast and incorporate the sanctuary program's System Wide Monitoring guidelines.

Strategy CS-6: Work with partners to integrate data integration and infrastructure for SEA-S programs.

Activity 6.1 SEAS program needs to be fully integrated with other science programs on a regional basis and need to use new technologies to link data sets from local and regional ecosystem monitoring and characterization programs within the West Coast sanctuaries. As part of an effort to develop a west coast regional observation system to support system-wide monitoring in the five West Coast sanctuaries, the ONMS will partner with researchers and the National Oceanographic Data Center (NODC) National Coastal Data Development Center (NCDDC) and will use new technologies for data and information management.

- A. Partner with local and regional researchers to develop complementary data collection methods and consistent data base structures to improve data exchange and data integration.
- B. Partner with the National Oceanographic Data Center (NODC) National Coastal Data Development Center (NCDDC) for data and information management support. Work with NCDDC to support ONMS efforts to build on SIMoN's existing structure to enhance data input and review, data management, analyses, reporting, archiving and dissemination functions in order to facilitate the use of the SIMoN framework by other sanctuaries. NCDDC will address requirements and needs for data rescue, metadata, federal compliance issues, and data accessibility and delivery. In addition, NCDDC will work with the ONMS to expand the use of the Sanctuary Integrated Monitoring Network (SIMoN) planned for the GFNMS in 2015.
- C. Develop the administrative infrastructure to identify and act on cross-boundary opportunities, collaborate with large-scale initiatives, and interpret the results for natural resource managers and public audiences across the region.

- D. Establish a regional monitoring coordination team. The regional monitoring team shall consist of the site's research coordinator and possibly additional science staff. The team will develop a regional science communication plan to improve coordination, evaluate effectiveness of monitoring programs, develop "state of the sanctuary" reports to help assess the health of the sanctuaries, and develop a regional ecosystem-based science operating plan in collaboration with each other to meet site, regional and national monitoring needs.
- E. Increase the use of new technologies to enhance data collection, expedite data management, and improve data availability for outreach and ecosystem protection. The sanctuary will automate data collection for near-real time retrieval of uncorrected data by developing on-line data entry and data downloading, and building a multi-sanctuary "real-time" database. The data will be available through CICORE, SEAMAP, SIMoN and IMaST portals and should result in expedited project analyses and findings, the ability to post new findings on the web site, and integrate new findings into exhibits and classroom activities.

Potential Partners:

Federal: National Park Service, Point Reyes National Seashore, US Fish and Wildlife Service (USFWS), NOAAs Deep-sea Coral Research and Technology Program, NOAA Damage Assessment, Research and Restoration Programs (DARRP), National Marine Fisheries Service (NMFS), NMFS SW Science Centers, NMFS Marine Mammal Stranding Network, NOAA Marine Debris Program, NOAA National Oceanographic Data Center (NODC), NOAA National Coastal Data Development Center (NCDDC), Southwest Environmental Response Application (ERMA), Monterey Bay National Marine Sanctuary (MBNMS), MBNMS Beach COMBERS, MBNMS-Sanctuary Integrated Monitoring Network (SIMoN), Olympic Coast National Marine Sanctuary (OCNMS), OCNMS Central Observation and Seabird Survey Team (COASST), Cordell Bank National Marine Sanctuary (CBNMS), San Francisco Bay National Estuarine Research Reserve, CeNCOOS, NSF IGERT Internship

State & County: California Department of Fish and Wildlife (CDFW), CA State Parks, CA Office of Spill Prevention and Response (OSPR), CA Department of Public Health HAB monitoring, CA-MLPA program, PISCO, BOME MARINE, State Coastal Conservancy, Sonoma State University, UC Davis Bodega Marine Lab, Duke University, San Francisco State University (SFSU), Hawaii Pacific University, University of Washington, Duke University SEAMAP, CICORE, Sonoma Coast State Parks, Fitzgerald Marine Reserve (FMR), Moss Landing Marine Laboratories

Other: Farallones Marine Sanctuary Association (FMSA), Point Blue Conservation Science, Tomales Bay Watershed Council, Stewards of the Coast and Redwoods, Sea Ranch Task Force, The Marine Mammal Center, California Academy of Sciences

GFNMS CONSERVATION SCIENCE

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY CS-1: Maintain Beach Watch program to monitor marine life and human activities on sanctuary beaches.	Develop monitoring programs to establish baselines, understand long-term status and trends, detect emerging issues, and guide management decisions.	Design research and monitoring projects that are responsive to management concerns and contribute to improved management of the sanctuary.	Increase understanding of human-use activities and their impacts on sanctuary resources.	1) Complete baseline data set about the resources of the sanctuary. 2) Expand long-term data set. 3) Integrate data into ERMA online ArcView database to be used during emergency response.	Ecosystem Protection Coordinator and Research Coordinator	1) Beach Watch Annual Report 2) Collaborative research papers 3) NRDA data 4) Web-based database
STRATEGY CS-2: Conduct research, as needed, to guide permit conditions	Develop monitoring programs to understand long-term status and trends, detect emerging issues, and guide management decisions.	Design research and monitoring projects that are responsive to management concerns and contribute to improved management of the sanctuary.	To determine appropriate permit conditions and effectiveness of new regulations.	1) Complete assessment of white shark behavior in relation to numbers of vessels, at approach distances, during various predator-prey interactions (short term). 2) Sufficient data to make recommendations.	Research Coordinator and Ecosystem Protection Coordinator	Report with recommendations

Conservation Science Action Plan
GFNMS Draft Management Plan

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY CS-3: Host a biennial research workshop to facilitate information exchange in the GFNMS.	1) Increase our knowledge and understanding of the estuarine, nearshore and offshore ecosystems in GFNMS. 2) Develop monitoring programs to understand long-term status and trends, detect emerging issues, and guide management decisions. 3) Develop research programs to identify and address specific resource management issues and assess effectiveness of management solutions.	Encourage information exchange and cooperation among all organizations and agencies undertaking management related research in the sanctuaries to promote more timely and informed management.	1) To track data collected on sanctuary wildlife and habitats and qualities as a source of information for managing sanctuary resources. 2) Identify data gaps as they pertain to management needs.	Track increases in number and quality of monitoring and research projects in and around the sanctuary, and their relevance to sanctuary resources management issues.	Sanctuary Superintendent, Research Coordinator, Ecosystem Protection Coordinator	1) Workshop proceedings 2) Website 3) SIMoN listing
STRATEGY CS-4: Develop and implement integrated sanctuary ecosystem assessment and monitoring programs	Develop monitoring programs to establish baselines, understand long-term status and trends, detect emerging issues, and guide management decisions.	Design research and monitoring projects that are responsive to management concerns and contribute to improved management of the sanctuary.	Increase understanding of human-use activities and their impacts on sanctuary wildlife and habitats.	1) Complete baseline data set about the habitats and wildlife of the sanctuary. 2) Expand long-term data set. 3) Integrate data into ERMA online ArcView database to be used during emergency response.	Research Coordinator Resource Protection	1) SEAS Biennial Report 2) Rocky intertidal biennial report, 3) Collaborative research papers 4) NRDA data 5) Web-based database

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY CS-5 Complete characterizations of sanctuary biological and physical features.	Adequately characterize sanctuary resources to establish baselines, understand long-term status and trends, detect emerging issues, and guide management decisions.	Complete site characterization of all sanctuary habitats, key indicator species and oceanographic processes, and physical features of the sanctuary.	Increase understanding of sanctuary wildlife and habitats and physical processes and how the sanctuary effect population health	1) Complete baseline benthic surveys and maps 2) Update species inventory 3) Quantify species distribution 4) Quantify introduced species distribution	Research Coordinator Resource Protection	1) Benthic maps of areas of ecological significance, and species 2) inventory of native species, 3) inventory of introduced species
STRATEGY CS-6 Work with partners functional integration and infrastructure for SEA Station and Survey programs	Effective operations and increased public awareness and information exchange	Automate data collection procedures to expedite data exchange; data summaries and data interpretation on web sites	Increased access and distribution of data	Data are analyzed within one year of collection and summary is posted	Research Coordinator	1) Use of data logging and digital imagery; 2) Methods are used by multiple management and marine researchers; 3) DRAFT data sets are available for emergency response and injury assessment activities within three days of collection



RESOURCE PROTECTION ACTION PLAN

PROGRAM STATEMENT

Consistent with the purposes and policies of the National Marine Sanctuaries Act (NMSA), NOAA uses an ecosystem approach to managing the marine areas of the sanctuaries. Gulf of the Farallones National Marine Sanctuary's (GFNMS) ecosystems include habitat structure, species assemblages, and ecological processes, as well as the many interactions with humans and their activities. GFNMS developed a resource protection program to expressly maintain an ecosystem perspective while providing oversight in addressing the multitude of resource protection issues the sanctuary is currently facing, as well as anticipating and planning for new and emerging issues on the horizon.

PROGRAM DESCRIPTION

Pursuant to the NMSA, GFNMS' role is protection of the area's natural resource and ecosystem values by protecting the biodiversity, productivity and aesthetic qualities of the marine environment of the Gulf of the Farallones through ecosystem-based management. The GFNMS incorporates the following principles into management:

1. Ecosystem-based management;
2. Precautionary approach;
3. Adaptive management; and
4. Managing for sustainability.

RESOURCE PROTECTION GOAL

Maintain and, where necessary, restore the natural biological and ecological processes in the sanctuary by evaluating and addressing adverse impacts from human activities on sanctuary ecosystems.

RESOURCE PROTECTION OBJECTIVES

1. Ensure protection for the habitats, wildlife, and qualities of GFNMS.

2. Continue to build on partnerships, collaborative efforts, and coordination with other agencies, institutions, and organizations, in taking a comprehensive and effective ecosystem protection approach.

RESOURCE PROTECTION ACTION PLAN

NEW AND EMERGING ISSUES

Although a wide range of issues have been included in the management plan action plans, many other issues are not addressed. These include: (1) issues which are currently considered to have relatively small impacts, but which may grow to have large impacts in the future; (2) activities which may be occurring in similar environments, but not actually in the sanctuary; and/or (3) activities that are based on new technology, and their potential impacts are not well understood. Emerging issues may include activities that are currently unforeseen, but may emerge in the future due to technological advances, changes in operations, changes in market demand, and increased pressures on the coast.

STRATEGY RP-1: Develop a coordinated communication system among all national marine sanctuaries and other natural resource management agencies to stay informed about new and emerging issues, share information, and provide a forum for exchange and policy discussion.

Activity 1.1 The National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), and ONMS are addressing new and emerging issues in some capacity every day. Each of these divisions and offices comment on environmental documents from other agencies, provide comment on policy development from within NOAA, and consult on new and emerging issues either on the ONMS site level or from congressional inquiries. GFNMS will track, review, and comment on environmental assessments and environmental impact statements (EIS) that have the potential to affect the resources of GFNMS.

Activity 1.2 GFNMS will formalize a communication system and leverage opportunities with other natural resource management agencies to exchange ideas on new and emerging issues. Forums for information exchange include:

- A. California Coastal Zone Managers quarterly meetings.
- B. Annual Coastal Zone Managers meeting in Washington, D.C.
- C. Conferences and professional meetings.

STRATEGY RP-2: Develop a resource protection plan (policy) and potential regulations to minimize user conflicts and provide special areas of protection for sensitive habitats, living resources, and other unique sanctuary features, such as Special Wildlife Protection Zones.

Activity 2.1 Determine the need to take a proactive approach and address specific ecosystem management issues. This plan will be built in consideration of other management strategies, both temporary and permanent.

- A. Characterize and map the wildlife and habitats of the sanctuary to identify and link species distribution with critical areas/phases of their life history.
- B. Overlay socioeconomic profile of human activities taking place in the sanctuary.
- C. Use stakeholder-based group processes either by receiving advice from the sanctuary advisory council or participating in other agency working groups, and scientific expertise to review data to determine possible indicators of “special areas of concern” and/or “species of concern.”

STRATEGY RP-3: *Develop strategy to protect habitats that are known to be “special areas of concern.”*

Activity 3.1 Through a community-based process, make a determination on special status for particular areas to protect and restore habitat for marine life.

REGULATORY DEVELOPMENT

One of the NMSA’s purposes is to facilitate compatible use that is consistent with its primary purpose of ecosystem protection. To this end, each of the national marine sanctuaries has a discreet set of site-specific regulations or prohibitions (15 CFR § 922), and general policy under the NMSA (16 USC § 1431 et seq.).

STRATEGY RP-4: *GFNMS will develop a program to consistently and continuously review and evaluate sanctuary regulations, including its boundaries.*

Activity 4.1 Evaluate the appropriateness and effectiveness of current sanctuary regulatory language (prohibitions) in addressing the priority ecosystem protection issues identified through the management plan review process.

- A. Interpret, refine, amend, and develop site-specific regulations as needed following the appropriate public process.
- B. Ensure coordination and consistency with other natural resource management agencies regulations and permits.

PERMITTING

Generally, permit requests are for research or education purposes. The sanctuary evaluates these requests on a case-by-case basis in detail to determine if the activity is necessary to be conducted in the sanctuary and the extent of the activity’s impacts on sanctuary resources or qualities.

STRATEGY RP-5: *Continue to implement a formalized permit program as a mechanism to review requests to conduct prohibited activities within the sanctuary, and where possible permit these activities to be conducted in such a way to have negligible effects.*

Activity 5.1 In order to understand, monitor, and control prohibited activities within the sanctuary, and to minimize cumulative impacts from these activities, the permit program will continue to review projects by:

- A. Evaluating permit requests on a case-by-case basis.
- B. Developing permit requirements for applicants on procedures and operations to avoid or reduce impacts to sanctuary wildlife, habitats, or qualities.
- C. Tracking permitted activities to ensure compliance with permit conditions.
- D. Requiring applicants to provide the sanctuary with the data and findings gained through research conducted with research permits and submit findings on SIMoN.
- E. Ensure permits are issued in compliance with national policies, National Environmental Policy Act (NEPA), NMSA, Marine Mammal Protection Act (MMPA), and other environmental protection legislation.
- F. Review all proposed projects with respect to environmental consequences and the level of impact, individually or cumulatively, and make a determination if the activity is excluded from the requirement to prepare an environmental assessment or environmental impact statement.

Activity 5.2 The Permit Coordinator will coordinate with other regulatory agencies issuing permits to ensure consistency with applicable laws.

- A. Coordinate with other regulatory agencies to ensure that other agency permits are consistent with the sanctuary's regulations. Inconsistencies may be rectified by incorporating or referencing the sanctuary's regulations.
- B. Consult with other agencies, as needed, to ensure that Sanctuary permits are consistent with other agencies' laws and regulations and develop appropriate permit conditions.

Activity 5.3 Conduct outreach about the sanctuary's permit process to help inform potential applicants and bring them into compliance with the sanctuary's permit process.

- A. Provide sufficient outreach to education and research institutions and individuals wishing to conduct prohibited activities within the sanctuary about the permit application process.
- B. Use the SAC as a link to educate the larger community on the sanctuary's permitting process.

PROTECTED RESOURCES ENFORCEMENT PLAN

The objective of this program is to achieve ecosystem protection through compliance with sanctuary regulations and other applicable state and federal statutes. The mission of sanctuary enforcement is to ensure compliance with the NMSA (16 USC § 1431 et seq.) and applicable regulations of the sanctuary (15 CFR § 922). The approach is two-fold in nature: (1) conducting public outreach as a tool to inform and encourage voluntary compliance; and (2) the use of patrols and other traditional law enforcement methods to enforce regulations and investigate incidents or suspected prohibited activities. Together, these two programs should result in a regular and ongoing deterrent presence in sanctuary waters and improve compliance with sanctuary regulations.

STRATEGY RP-6: *Strive to increase ecosystem protection through compliance with sanctuary regulations and other applicable local state and federal statutes that protect sanctuary natural resources.*

Activity 6.1 Ensure sufficient patrol presence in the sanctuary through the development of partnerships and interagency coordination.

- A. Develop enforcement priorities and articulate them on an annual basis in NOAA Joint Enforcement Agreement (JEA) between NOAA Office of Law Enforcement and California Department of Fish and Wildlife.
- B. Develop compliance priorities for permitted activities.
- C. Develop recommended patrol schedules.
- D. Develop partnerships with other federal, state and local enforcement agencies in order to provide a strong multi-jurisdictional enforcement presence throughout the sanctuary.
- E. Facilitate communication among enforcement assets to ensure coordination. This can be done through the establishment of a Law Enforcement Technical Advisory Committee.
- F. Promote training and, as appropriate, offer to other law enforcement agencies.
- G. Involve the USCG Auxillary, Lighthawk and the Civil Aeronautical Patrol (CAP) in presence and patrol in sanctuary waters.

Activity 6.2 Use outreach tools to inform and encourage voluntary compliance with sanctuary regulations. These tools such as presentations, signage, electronic communications, newsletters, and displays may be used to affect behavior and change values as it is generally believed, that once informed, most individuals will choose to comply. Efforts will include:

Resource Protection Action Plan
GFNMS Draft Management Plan

- A. Integrate basic information regarding sanctaury regulations, as needed, into coast-side signage throughout geographic range of sanctuary.
- B. Work with California Dept. of Motor Vehicles to include informational inserts in boat license renewal packets (to be coordinated with all California national marine sanctuaries).
- C. Give presentations to yacht clubs, the Coast Guard Auxiliary, and other appropriate groups.

Activity 6.3 Develop a volunteer-based program that will use education and outreach to affect behavior and values to achieve voluntary compliance with sanctuary regulations.

- A. Identify major user groups for targeted education and outreach efforts about sanctuary regulations.
- B. Conduct community outreach program to encourage compliance with sanctuary regulations and citizen involvement in reporting violations.
- C. Hold meetings and workshops to inform user groups and promote voluntary compliance and stewardship.
- D. Train volunteers as a component of the Sanctuary Naturalist Corps (see Education Action Plan).

Activity 6.4 Develop enforcement tools to ensure effectiveness of the enforcement program.

- A. Provide assistance to Office of the General Counsel Enforcement Section (GCES) on developing hierarchy of options for addressing minor violations including: warnings, fix-it tickets, and summary settlements/on the scene citations when applicable.
- B. Evaluate the effectiveness of technology for surveillance including satellite imagery, unmanned aerial surveys, wireless cameras, and tracking systems.
- C. Provide technical assistance to NOAA Office of Law Enforcement and GCES on violation assessment, including conducting impact analyses.
- D. Comment on national penalty schedule.

EMERGENCY RESPONSE

Incidents within the sanctuary requiring an emergency response may have the potential to significantly impact sanctuary wildlife, habitat and cultural resources. Incident response may be to a recently occurring catastrophic event (e.g., plane crash or vessel grounding), or the delayed

or persistent impacts from incidents that occurred years previously (e.g., dumpsites or historic shipwrecks).

STRATEGY RP-7: *Review and revise the sanctuary's spill response plan and emergency response portfolio (ERP) in order to be prepared to respond to an incident.*

Activity 7.1 GFNMS will review and revise its in-house, spill response plan and ERP, based on the Incident/ Unified Command System (ICS) and the USCG's Area Contingency Plan (ACP), to respond to oil spills, hazardous material spills, grounded vessel or natural disasters. The response plan will also be reviewed, evaluated and updated on an annual basis. The ERP will be reviewed, evaluated and updated on an as-needed basis throughout the year. GFNMS' spill response plan and ERP:

- A. Lays out emergency response notification (including all relevant agencies, user groups, and media) and preparation procedures.
- B. Identifies specific duties for sanctuary staff.
- C. Outlines training standards and instructs all sanctuary staff to be trained on an ongoing basis with regular updates and refresher courses, and ready to respond in the case of an emergency.
- D. Provides appropriate contact lists for other ONMS sites, responder agencies, local, state, and federal park and land managers, and life safety agencies.

Activity 7.2 Develop tools to ensure a coordinated and timely response to incidents.

- A. Establish a relationship and coordinate with ORR, Emergency Response Division (ERD), NOAA's Science Support Coordinator and NOAA Regional Response Team representative, and the ONMS (including other sanctuary site emergency response staff, the West Coast Regional Office, and Headquarters).
- B. Identify resources at risk, potential high probability threats, available response and information assets, notification contacts, maps, coastal observation systems, and jurisdictional information. This information can be used in area contingency plans, the GFNMS in-house emergency response plan, and the Southwest Environmental Response Management Application (ERMA).
- C. Provide GFNMS data and information to help populate the Southwest ERMA, a web-based interface system that is by responder agencies (e.g. USCG, CDFW OSPR, NOAA ORR) used on- and off-line to assist in incident response, facilitating the abilities of sanctuary staff to provide information to a unified command during an incident. Enhance ERMA to accept and provide near-real time data collected during response efforts.

Resource Protection Action Plan
GFNMS Draft Management Plan

- D. Participate in the Resources and Undersea Threats (RUST) database that catalogs submerged resources, threats, and hazards data.
- E. Develop contingency response fund for prompt removal or recovery of abandoned vessels.
- F. Identify potential injury to resources at risk from the proposed use of alternative response technologies during an oil pollution response event by performing a regional specific Net Environmental Benefits Analysis. Develop a GFNMS policy and recommended guidelines for the use of dispersants in advance of a spill in order to ensure this information can be more readily provided to the ICP.
- G. Maintain and enhance data collection, interpretation, and mapping from Beach Watch and ACCESS monitoring for determining resources at risk, effectiveness of response measures, clean-up end points, and baseline conditions.

Activity 7.3 Assess levels of potential risk from activities in and adjacent to the sanctuary.

- A. Track distribution and numbers of sensitive species and habitats.
- B. Develop resources-at-risk model analysis for the sanctuary.
- C. Participate in regional response team to address risks to sanctuary resources.
- D. Based on risk assessment, develop outreach program targeting user groups.

DAMAGE ASSESSMENT AND RESTORATION

Section 312 of the NMSA authorizes NOAA to pursue civil actions to recover response costs and damages for incidents that injure, destroy, or cause the loss of sanctuary resources. Funds collected by NOAA under Section 312 are deposited in the Damage Assessment and Restoration Revolving Fund (DARRF). The scope of Section 312 covers how the response costs and damages recovered shall be retained and used, as follows:

- (1) **RESPONSE COSTS.**—Amounts recovered by the United States for costs of response actions and damage assessments under this section shall be used, as the Secretary considers appropriate—
 - (A) to reimburse the Secretary or any other Federal or State agency that conducted those activities; and
 - (B) after reimbursement of such costs, to restore, replace, or acquire the equivalent of any sanctuary resource.
- (2) **OTHER AMOUNTS.**—All other amounts recovered shall be used, in order of priority—
 - (A) to restore, replace, or acquire the equivalent of the sanctuary resources that were the subject of the action, including for costs of monitoring and the costs of curation and conservation of archeological, historical, and

- (B) cultural sanctuary resources;
to restore degraded sanctuary resources of the national marine sanctuary that was the subject of the action, giving priority to sanctuary resources and habitats that are comparable to the sanctuary resources that were the subject of the action; and
- (C) to restore degraded sanctuary resources of other national marine sanctuaries.

STRATEGY RP-8: *Formalize plans that address incidents that injure sanctuary ecosystems.*

Activity 8.1 Coordinate with NOAA's Office of Response ONMS HQ, ORR Assessment and Restoration Division (ARD), the National Marine Fisheries Service Restoration Center (RC) and Trustee Councils to restore sanctuary wildlife and habitats.

- A. Work with other NOAA offices and agencies to assess natural resource damages and implement ecosystem restoration projects.
- B. Coordinate with ONMS Resource Protection Coordinator and Office of Response and Restoration (ORR) Assessment and Restoration Division (ARD) on natural resource damage assessments. Provide cost estimate and cost documentation for response and National Resource Damage Assessment costs. Provide ONMS HQ, General Counsel for Natural Resources, ORR and RC and other state, tribal and federal trustees litigation support as appropriate.
- C. Work with ONMS Resource Protection Coordinator and trustee councils (oil spill cases) to implement restoration programs.
- D. Work with state, tribal and federal trustee scientists on developing monitoring programs to assess restoration effectiveness if sufficient funds are provided in settlements.

COLLABORATIVE PLANNING AND MANAGEMENT

Sanctuary program development and planning efforts provide an opportunity for public input in identifying and resolving ecosystem protection issues. These partnerships and public involvement are essential ingredients to successful resolutions and implementation of strategies.

STRATEGY RP-9: *Continue to build partnerships and leverage opportunities for protecting sanctuary wildlife, habitats, qualities and cultural resources.*

Activity 9.1 Coordinate development of collaborative processes.

- A. Identify appropriate partners for implementing the management plan.

Resource Protection Action Plan
GFNMS Draft Management Plan

- B. Coordinate with sanctuary advisory council on multi-stakeholder options for addressing ecosystem protection issues.
- C. Provide coordination, oversight and facilitation, as appropriate, to issue-specific committees addressing targeting issues.

Activity 9.2 Coordinate with other agency management and restoration plans to enhance and protect the sanctuary.

- A. Coordinate with Marin County Open Space and the National Park Service on Bolinas Lagoon restoration plans.
- B. Coordinate with the Farallon National Wildlife Refuge on the Coordinated Conservation Plan update.
- C. Coordinate with U.S. Coast Guard on commercial vessel traffic patterns and whale observations.
- D. Coordinate with NMFS, Sonoma County Water Agency, and U.S. Army Corps of Engineers on the management of the Russian River mouth.
- E. Take an active role in reviewing project proposals, environmental impact statements and environmental impact reports as needed to protect and restore sanctuary biological and ecological processes.

RADIOACTIVE WASTE DUMP

The area referred to as the "Farallon Islands Radioactive Waste Dump" (FIRWD) is where approximately 47,800 barrels of low-level radioactive waste were dumped between 1946 and 1970. Although the containers were to be dumped at three designated sites, they are actually strewn over an area of 540 square miles in depths ranging from 300 to more than 6,000 feet within GFNMS. Research results to date are inconclusive on the impacts on the marine ecosystem from radioactive leakage. Significant public fear and uncertainty about the contamination from leaking barrels continue, particularly since major commercial fishing, sport fishing and other recreational activities take place in the area in and above the dump site.

STRATEGY RP-10: *Evaluate condition of, and actual impacts on sanctuary resources and qualities from the Farallon Islands radioactive waste dump.*

Activity 10.1 Convene a group of agency scientists to evaluate status of radioactive waste dump and make recommendations on roles and responsibilities for addressing some of the issues associated with FIRWD.

- A. Identify appropriate agency partners.

- B. Inventory current research on the FIRWD and identify data gaps.
- C. Determine under whose mandate the issues/impacts will be addressed.

Activity 10.2 Develop an outreach campaign to inform the public on the status and potential threats of the FIRWD.

- A. Develop a communications plan to systematically educate the public and target audiences on a routine basis about the status of FIRWD.
- B. Develop a list of audiences, both targeted and general public, on which to focus outreach efforts.
- C. Update nautical charts to show known area with radioactive waste containers.
- D. Identify partners, such as other agencies or institutions, to help develop outreach materials and participate in outreach efforts.

ECOSYSTEM RESTORATION

In order to restore the natural biological and ecological processes of the sanctuary, it is critical to evaluate and address adverse impacts from human activities on sanctuary wildlife, habitats and qualities. Tomales Bay and Bolinas Lagoon are two places in the sanctuary that have been identified as a priority for ecosystem restoration projects. Tomales Bay and Bolinas Lagoon have long been recognized as special places deserving a high level of protection by citizens and local, state and federal agencies. Both areas are significant biological communities that support a diversity of habitats, including eelgrass beds, intertidal sand and mud flats and salt and freshwater marshes. Thousands of species of birds, invertebrates and plants and numerous threatened and endangered species inhabit both of these estuarine ecosystems.

STRATEGY RP-11: *In cooperation and coordination with other local, state and federal agencies, develop and implement a comprehensive plan to ensure the protection of water quality, wildlife, habitats and safety in Tomales Bay.*

In 2013 GFNMS, in collaboration with the California State Lands Commission, adopted the Tomales Bay Vessel Management Plan, which was developed as the result of a long-term multi-agency effort to streamline and coordinate vessel management activities for the benefit of the public. It represents extensive input from the boating community and other local stakeholders, and the intended outcome is a collaborative plan that provides guidance to the agencies and the public for managing boater-related uses of Tomales Bay. The primary goals of the Plan are to protect habitat, decrease threats to and disturbance of wildlife, and ensure safe and enjoyable water-related recreation by removing and preventing illegally and improperly placed moorings and mooring materials. The Plan addresses numerous issues including vessel sewage discharge, impacts from moorings, derelict or deserted vessels, introduction of invasive species, disturbance of wildlife, and discharges of oil, fuel, and vessel maintenance products.

GFNMS has taken a lead in proposing both programmatic and management actions to address priority ecosystem protection issues that complement other agencies' actions, and is one of the lead agencies supporting the development of a comprehensive plan for Tomales Bay. The adoption of the Vessel Management Plan was the first step in this endeavor and the following activities are based on the results of the adoption of the Vessel Management Plan.

Activity 11.1 Implement vessel management guidelines in coordination with ten local, state and federal agencies to address vessel use that may be impacting sensitive habitats.

- A. Control the number of moored vessels and/or moorings in Tomales Bay.
- B. Take actions to promote boater compliance with all discharge regulations.
- C. Identify sensitive areas that may warrant additional protection.
- D. Coordinate between agencies on developing an education program about impacts from moorings and vessel activities in Tomales Bay.

Activity 11.2 Develop sewage, oil and bilge water waste disposal and facility guidelines for public and private boating facilities.

- A. Coordinate with existing public and private boating facility operators to develop sewage waste or oil and bilge waste facilities. Agency coordination will include streamlining of permits and assisting with seeking funding for construction of sewage waste facilities.
- B. Encourage new facilities, or facilities with expansion plans, to provide sewage waste management facilities.
- C. Take regulatory action or develop voluntary guidelines to ensure that vessels that are occupied and moored within the Sanctuary have the capacity to manage on-board sewage waste during the extent of their day. Any regulatory action would be developed in accordance with mandates requiring public process.
- D. Coordinate with other agencies on developing a targeted outreach program to educate boaters on proper management of sewage waste.
- E. Work with the San Francisco Bay Regional Water Quality Control Board on developing regional standards for sewage disposal facilities for Tomales Bay.

Activity 11.3 Develop an enforcement plan to address derelict and abandoned vessels and moorings in Tomales Bay.

- A. Develop a plan for removal of derelict and abandoned vessels.
- B. Develop a plan for removal of moorings that are in violation of regulations and/or pose a threat to water quality, marine wildlife and natural benthic habitat, and/or safety of Tomales Bay.
- C. Take action to prevent placement of unapproved moorings.

Activity 11.4 Address impacts to sensitive habitats from construction, modifications and additions to docks and piers in Tomales Bay.

- A. Protect sensitive nearshore and estuarine habitats by ensuring docks and piers in Tomales Bay stay within their existing footprint. Any regulatory action would be developed in accordance with mandates requiring public process.

Activity 11.5 Through a community-based, multi-stakeholder process develop a comprehensive plan addressing aquaculture and native oyster bed restoration in Tomales Bay.

STRATEGY RP-12: *Work in collaboration with federal, state and local agencies, and the local community, to restore the natural ecological processes of Bolinas Lagoon.*

Activity 12.1 Collaborate in the development and implementation of a comprehensive plan to examine actions that would reduce, and possibly reverse, sediment accumulation and habitat shifts caused by human impacts.

- A. Participate as a member of the Bolinas Lagoon Advisory Council.
- B. Work with partners to design and implement restoration projects.
- C. Conduct regular outreach through meetings, workshops (e.g. the State of the Lagoon), and correspondence with the community to keep them apprised about on-going research and restoration efforts.

STRATEGY RP-13: *In cooperation and coordination with local, state and federal agencies, develop and implement a comprehensive plan to ensure the protection of water quality and habitat in Arena Cove.*

Activity 13.1 Develop mooring guidelines in coordination with other agencies to address vessel moorings.

- A. Control the number of moored vessels and/or moorings in Arena Cove.

- B. Through a permitting process in coordination with California State Lands Commission, ensure that vessels that are moored within Arena Cove have the capacity to manage on-board sewage waste. Take actions to promote moored boater compliance with all sanctuary discharge regulations.

Activity 13.2 Develop vessel sewage waste disposal and facility guidelines for Arena Cove.

- A. Coordinate with the City of Point Arena to develop vessel sewage waste management facilities. Agency coordination will include streamlining of permits and assisting with seeking funding for construction of sewage waste facilities.
- B. Coordinate with other agencies on developing a targeted outreach program to educate boaters on proper management of vessel sewage waste.

CLIMATE SMART CONSERVATION

The sanctuary's Climate Smart Conservation Project is an effort to integrate climate change mitigation, monitoring, education, and adaptation into sanctuary management through the development of four planning documents: 1) Green Operations Plan; 2) Ocean Climate Indicators Monitoring Inventory and Plan; 3) Ocean Climate Education Plan, and 4) Climate Smart Adaptation and Implementation Plan. These products combined will form the sanctuary's Climate-Smart Conservation Plan, a first of its kind along the California coast and within the National Marine Sanctuary System, and a guiding document for sanctuary management and partners to ensure long-term viability of the habitats and resources protected by the sanctuary.

STRATEGY RP-14: *Integrate climate change mitigation, monitoring, education, and adaptation into sanctuary management through the development of the Gulf of the Farallones National Marine Sanctuary Climate Smart Conservation Plan.*

Activity 14.1: Publish to the ONMS Conservation Science Series the report, "Ocean Climate Indicators: A Monitoring Inventory and Plan for Tracking Climate Change in the North-central California Coast and Ocean Region", that identifies 12 indicators and identifies a consistent way to measure and manage the impacts of climate change in the region, and provides a foundation of scientific consensus for the Climate Smart Conservation Plan. This report was drafted through A working group of the Gulf of the Farallones National Marine Sanctuaries Advisory Council .

Activity 14.2 Reduce Site Emissions

- A. Complete an annual emissions inventory for the facilities and operations of GFNMS (ongoing since 2008).
- B. Maintain staff Green Team to prioritize and implement Green Operations Plan.

Activity 14.3 Develop the Ocean Climate Education Plan.

- A. Sanctuary climate and education staff develop the Ocean Climate Education Plan through identifying existing and new education strategies that address the effects of climate change on local marine ecosystems, appropriate audiences for each impact, and funding requirements in the education and outreach focus areas of 1) Public Programs, 2) School Programs, 3) Exhibits and Interpretive Signage, 4) Media.
- B. Review and incorporate specific education and outreach guiding principles into the plan, such as the NOAA Climate and Ocean Literacy Principles, Office of National Marine Sanctuaries Education Strategic Plan, and West Coast Sanctuaries Interpretive Plan.
- C. Incorporate the key climate change issues affecting the local marine environment identified in the Climate Change Impacts Report.
- D. Provide staff and partner education opportunities on climate change.

Activity 14.4 Develop the Climate Smart Adaptation and Implementation Plan.

- A. Identify scope of adaptation project and internal planning team.
- B. Internal planning team develop draft list of focal resources based on internal and external research and management documents.
- C. Conduct Focal Resources Stakeholder Workshop to finalize list of focal resources through expert input.
- D. Conduct Vulnerability Assessment Stakeholder Workshop to assess vulnerability of focal resources to climate change impacts through expert input.
- E. Conduct Scenario Planning Stakeholder Workshop to evaluate vulnerability assessments in the context of different scenarios for the interaction of climate and non-climate stressors, and define and name distinct scenarios for the study region, based on the top 2 or 3 most uncertain/important drivers.
- F. Request a working group of the Sanctuary Advisory Council to develop the Climate Smart Adaptation Plan.
- G. Sanctuary Advisory Council review of the recommended plan and forward to the sanctuary superintendent.
- H. Sanctuary staff develops the Adaptation Implementation Plan, with immediate emphasis on identified pilot adaptation responses.

- I. Implement pilot green-resilient shoreline projects from Adaptation Implementation Plan.

Activity 14.5 Assemble the GFNMS Climate Smart Conservation Plan and request ONMS Climate Smart Sanctuary Certification.

- A. Compile and format each separate plan into a comprehensive Climate Smart Conservation Plan.
- B. Prepare the necessary documentation to request ONMS Climate Smart Sanctuary Certification.

Potential Partners:

Federal: US Coast Guard (USCG), United States Department of the Interior (DOI), United States Geological Survey (USGS), United States Army Corps of Engineers, Environmental Protection Agency (EPA), U.S. Navy, Point Reyes National Seashore (PRNS), Golden Gate National Recreational Area (GGNRA), NOAA General Council Ocean Service (GCOS), National Marine Fisheries Service (NMFS), NOAA Office of Law Enforcement (OLE), NOAA Office of National Marine Sanctuaries (ONMS), Cordell Bank National Marine Sanctuary (CBNMS), Monterey Bay National Marine Sanctuary (MBNMS), Channel Islands National Marine Sanctuary (CINMS), Olympic Coast National Marine Sanctuary (OCNMS), sanctuary advisory council (SAC), NOAA National Centers for Coastal Ocean Science (NCCOS), NOAA Office of Response and Restoration (ORR) HAZMAT, National Park Service Pacific West Region

State & County: California Department of Fish and Wildlife (CDFW), California Department of Transportation (CalTrans), California Department of Health, CA Oil Spill Prevention and Response (OSPR), California State Lands Commission (CSLC), California Coastal Commission (CCC), California State Parks (SP), San Francisco Bay Regional Water Quality Control Board (SFRWQCB), California Department of Boating and Waterways (CDBW), California Department of Public Health (CDPH), California Ocean Science Trust, County of Marin, Marin Open Space District, County of Sonoma, Sonoma County Water Agency, City of Gualala, County of Mendocino, City of Point Arena.

Other: Marine Conservation Biology Institute (MCBI), Bolinas Lagoon Technical Advisory Committee, Bodega Marine Lab (BML), Point Blue Conservation Science

GFNMS RESOURCE PROTECTION

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY RP-1: Develop a coordinated communication system among all national marine sanctuaries and other natural resource management agencies to stay informed about new and emerging issues, share information, and provide a forum for exchange and policy discussion.	Maintain the natural biological and ecological processes in the GFNMS by evaluating and addressing adverse impacts from human activities on sanctuary resources and qualities.	Continue to build on partnerships; collaborative efforts; and coordination with other agencies, institutions and organizations to take a comprehensive and effective ecosystem protection approach.	Increase ability to take a proactive, rather than reactive approach to addressing issues, thus averting significant impacts on sanctuary resources.	1) Develop system to track and flag the most relevant new and emerging issues. 2) Take measures to evaluate, and address as appropriate, new and emerging issues that were identified through the JMPR process. 3) Establish communications system with other agencies and NMSs.	Sanctuary Superintendent, Ecosystem Protection Coordinator	Electronic Web-based tracking system
STRATEGY RP-7: Review and revise the sanctuary's emergency response plan, and be prepared to respond to an incident.	Maintain the natural biological and ecological processes in the GFNMS by evaluating and addressing adverse impacts from human activities on sanctuary resources and qualities.	Continue to build on partnerships; collaborative efforts; and coordination with other agencies, institutions and organizations to take a comprehensive and effective ecosystem protection approach.	Increase the sanctuary's ability to respond in a coordinated and timely manner to catastrophic events, and respond to delayed or persistent impacts to sanctuary resources from previous events.	Conduct regular emergency response drills to evaluate: 1) Emergency response notification system 2) Staff preparedness 3) Effectiveness of ERMA and RUST system tools 4) Effectiveness of Area Contingency Plan	Sanctuary Superintendent, Ecosystem Protection Coordinator, staff	1) Emergency response plan 2) ERMA 3) RUST

Resource Protection Action Plan
GFNMS Draft Management Plan

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
STRATEGY RP-8: Formalize plans that address incidents that injure sanctuary ecosystems.	Maintain the natural biological and ecological processes in the GFNMS by evaluating and addressing adverse impacts from human activities on sanctuary resources and qualities.	Build a comprehensive and coordinated Resource Protection plan to ensure protection for the resources and qualities of GFNMS.	Increase ability to assess natural resource injury and restore affected habitats and/or living resources.	Implement ecosystem restoration projects and monitor to assess restoration effort effectiveness.	Ecosystem Protection Coordinator, Research Coordinator	



ADMINISTRATION ACTION PLAN

PROGRAM STATEMENT

In order for Gulf of the Farallones National Marine Sanctuary (GFNMS) to implement a management plan that is effective in addressing the priority site-specific and cross-cutting resource management issues, as identified through the management plan review process, GFNMS will need to strengthen its infrastructure by increasing staff and financial resources. In addition to basic infrastructure needs, some administrative areas that will be addressed include: building partnerships; improving interagency coordination; and addressing regulatory and enforcement issues.

PROGRAM DESCRIPTION

Since 1990, GFNMS has grown from a staff of three with a budget of under \$300,000, to a staff of twenty-six and budget of \$1.4 million in 2013. The GFNMS' office manages the GFNMS), and the northern portion of Monterey Bay National Marine Sanctuary (MBNMS).

The Office of National Marine Sanctuaries (ONMS) provides oversight and coordination among the thirteen national marine sanctuaries by developing a framework for resource management, and directing national program and policy development. The sanctuary superintendent oversees site-specific management functions including implementation of the management plan. The management plan makes use of two complementary and strategic tools for ecosystem management: (1) programs, or action plans, carried out through Conservation Science, Education, and Marine Resource Protection programs, and (2) regulations, for controlling or restricting human behavior that is not compatible with cultural resources and ecosystem protection. The sanctuary superintendent establishes who is responsible for implementing specific programs, provides an administrative framework to ensure that all cultural resources and ecosystem protection activities are coordinated, and provides and manages an appropriate infrastructure to meet the goals and objectives of the management plan. The sanctuary superintendent reports directly to the West Coast Region (WCR) of the ONMS. In this capacity, the sanctuary superintendent represents the ONMS and is the primary spokesperson for GFNMS.

The ONMS and GFNMS are committed to coordinating with other federal, state, and local agencies in a continuous ecosystem management process. This process is designed to ensure the long-term protection of the unique cultural resources, habitats and wildlife of this region, while considering the demands of multi-use interests. Because of the complexity of managing the activities and protecting cultural resources, habitats and wildlife in the sanctuary, cooperative

efforts are necessary to effectively meet sanctuary goals. Overlapping jurisdictions, different agency mandates and limited resources necessitate the development of a management plan that brings together multiple institutions for the common purpose of ecosystem protection. Achieving the long- and short-term goals for this region requires the development of close and continuing partnerships.

ADMINISTRATIVE STRUCTURE

All thirteen national marine sanctuaries are managed by the ONMS. On an annual basis, the ONMS reviews and adjusts funding priorities and requirements to reflect ecosystem protection needs at each of the national marine sanctuaries. The ONMS and the site superintendent coordinate efforts to protect and manage sanctuary cultural resources, habitats, and wildlife with other federal, state, regional and local agencies according to the priorities laid out in the management plan, which itself is consistent with the purposes and policies of the National Marine Sanctuaries Act..

Sanctuary Superintendent

The GFNMS superintendent recommends to the ONMS priorities for annual allocation of funds for site-specific resource and ecosystem protection needs. The superintendent reports to the WCR on surveillance and enforcement activities, violations and emergencies, and program activities. The superintendent coordinates with the ONMS on evaluating, processing and issuing of permits; monitors and evaluates Conservation Science, Education, and Resource Protection programs; oversees staffing needs and requirements; coordinates on-site efforts of all parties involved in sanctuary activities including state, federal, regional and local agencies. Finally, the superintendent evaluates overall progress toward the resource and ecosystem protection objectives of the ONMS and prepares regular reports highlighting progress made in realizing these goals.

Sanctuary Staff

Under the direction of the superintendent, the sanctuary staff is directly responsible for implementation of the management plan. Although each staff member is assigned to one of the program areas, collectively the staff is responsible for coordinating their efforts in addressing resource and ecosystem protection issues.

Sanctuary Advisory Council

The sanctuary advisory council (SAC) has been structured in accordance with the ONMS guidelines and procedures consistent with the National Marine Sanctuaries Act.. The sanctuary advisory council, with its expertise and broad based representation, offers advice to the sanctuary superintendent on resource and ecosystem protection management issues and decisions. Gulf of the Farallones National Marine Sanctuary Advisory Council representation includes sixteen agency and stakeholder representatives and their respective alternates. The council is representative of a broad based constituency to ensure that the superintendent has a diverse information base upon which to make management decisions.

IMPLEMENTATION OF THE MANAGEMENT PLAN

Each of GFNMS' program areas (Education and Outreach, Conservation Science, and Resource Protection) has outlined action plans for implementing management plan strategies. These action plans are designed to directly address resource and ecosystem protection issues and guide management of GFNMS.

Action plans are purposely designed with general implementation guidelines as their parameters may change in the future. The action plans presented in the management plan address current resource and ecosystem protection issues identified as priorities by the sanctuary during the management plan review process. The implementation of these action plans is highly dependent on available staffing and financial resource allocation.

Implementation of the new management plan will require: coordination within and between action plans; sharing of staff and financial resources between program areas; and cooperation and coordination among many federal, state and local government agencies, as well as private organizations and individuals.

GFNMS' administration provides an organized structure and support system for implementing management strategies while providing the flexibility and guidance necessary to address changing, new, and emerging resource management issues.

Implementation Costs

Operating funds for sanctuary management come from federal appropriations to the ONMS. These funds cover expenses such as personnel salaries, vessel use and maintenance, utilities, property rental, equipment, and supplies.

Unpredictable and variable funding for staff and program development may affect specific aspects of the sanctuary management plan. The scale and scope of certain programs may be modified due to any unforeseeable changes in the level of funding. However, the goals and objectives of the plan will remain unchanged.

OTHER MANAGEMENT TOOLS

With limited staff and financial resources, partnerships are an integral part of successful resource and ecosystem protection of the sanctuary. The Gulf of the Farallones sanctuary superintendent may draw from a selection of standard management tools to formalize relationships with other federal, state and local agencies or the private sector. Examples of these agreements are a Memorandum of Understanding or Agreement, a Letter of Understanding or Agreement, an Interagency Agreement, a Cooperative Agreement, a grant, or a contract.

JURISDICTIONAL SETTING

ADMINISTRATION GOAL

1. Provide support for the site in achieving the goals of the management plan, and increase protection for the resources, ecosystem and qualities of the sanctuary.

ADMINISTRATION OBJECTIVES

1. Evaluate, maintain, and expand, as necessary, programmatic and administrative operations.
2. Identify appropriate staffing, budget levels, and facility needs to support implementation of the management plan.
3. Continue to build on partnerships, collaborative efforts, and coordination with other agencies, institutions and organizations.

ADMINISTRATION ACTION PLAN

OPERATIONS

The GFNMS headquarters office and visitor center is located at Crissy Field in the Presidio of San Francisco, California. In the future, satellite facilities and visitor centers are planned throughout the region.

STRATEGY AD-1: *New sanctuary facilities will be developed through various partnerships with both the public and private sector.*

Activity 1.1 Build a world class icon for marine stewardship in San Francisco.

- A. Implement the long-range Facilities Master Plan to guide development of an iconic site for marine stewardship.
- B. Adopt the recommendations of the Golden Gate National Recreation Area's Fort Point Station Cultural Landscape Report.
- C. Rehabilitate the current main office space to accommodate additional staffing needs and allow for future growth.
- D. Sustainably design the facilities to follow LEED standards.
- E. Showcase sanctuary marine life and cultural heritage.
- F. Serve as a destination for greater ocean literacy.

Activity 1.2 Continue to maintain the Crissy Field visitor center.

Activity 1.3 Increase the sanctuary staff's ability to access the marine waters of the sanctuary by expanding vessel capabilities and contracting more vessel time to support research and monitoring efforts. Currently, the sanctuary's research vessel a regional asset called the *FULMAR*, serves as a day-use platform supporting the three Central and Northern California sanctuary programs and partners. Investigate adding an additional boat to the West Coast Region to support the expanded GFNMS and CBNMS.

Activity 1.4 Implement a facilities plan for visitor centers and outreach venues. GFNMS has identified a number of outreach opportunities that cover the sanctuary's interpretive needs from both geographical and thematic points of view. The existing plan covers a geographic area from San Mateo to Sonoma County, and includes shared signage with MBNMS and CBNMS. Incorporate the expansion area into long-range interpretive planning. Outreach and interpretive exhibit venues being considered include:

- A. Bear Valley Visitors Center at Point Reyes National Seashore (PRNS) headquarters has an exhibit on GFNMS and CBNMS. The visitor center has 450,000 visitors per year from school children to local and recreational users.
- B. The PRNS lighthouse visitor center has space for a display about the national marine sanctuaries. GFNMS will partner with CBNMS to design an exhibit highlighting the natural history of the two sanctuaries.
- C. Bodega Marine Laboratory (BML) is the marine research arm of UC Davis (UCD), and the center of marine research on the north coast. GFNMS, in partnership with CBNMS, is proposing to update and expand its partnership with BML, including enhancing interpretive panels at the lab.
- D. Fort Ross State Park celebrates the Russian presence in northern California in the 19th century during the heyday of the Russian-American Company. It also tells the story of local Native American tribes who fished and hunted in the area. GFNMS is proposing to develop wayside signage themed on wildlife watching, including tide pool etiquette and marine mammal viewing.
- E. Bodega Head State Park is the best vantage for getting a perspective on GFNMS and CBNMS. This is a popular whale and sunset watching location. GFNMS and CBNMS propose to build a permanent whale watching station designed after one under construction at Beach 6, along the Olympic coastline.
- F. Update the three-paneled kiosk at Duxbury Reef that provides an interpretation of the intertidal habitats, intertidal etiquette and a description of the GFNMS.

Administration Action Plan
GFNMS Draft Management Plan

- G. GFNMS will partner work with the California Academy of Sciences to update of the Northern California Coast exhibit
- H. GFNMS will build a premier ocean learning and experiential visitor center at its headquarters location. The visitor center will feature hands-on, interactive exhibits on the marine environment, maritime history features, and exhibits for the ONMS. It will also have a theater for films, lectures, telepresence and seminars, as well as classrooms, , office space, and improved storage.
- I. GFNMS will update the maritime exhibit at the Aquarium of the Bay. This exhibit - an interactive kiosk - highlights maritime information in San Francisco Bay and beyond.
- J. GFNMS and MBNMS will update interpretive displays at the Pigeon Point Lighthouse. These displays highlight the maritime heritage of the area, including shipwrecks and lighthouse keepers. There will also be a panel on watchable wildlife.
- K. GFNMS will support the CBNMS exhibit at the Oakland Museum. The exhibit features CBNMS but includes information about GFNMS.
- L. GFNMS will continue to develop interpretive signs at coastal locations throughout central and northern California. Much of the signage will be developed in coordination with Cordell Bank and/or Monterey Bay national marine sanctuaries.
- M. GFNMS will open a visitor center in Half Moon Bay and investigate potential additional visitor centers in Sonoma and southern Mendocino County.

Activity 1.5 Improve, upgrade, maintain, and evolve the information technology infrastructure of the facilities. Continue to innovate technology through dedicated base funds, stable support staff, and strategic partnerships with Silicon Valley and other Bay area information technology leaders. The San Francisco Bay area is recognized as one of the most technologically advanced regions in the world. The GFNMS should tap into these local resources and creative thinking to evolve more efficient, creative, and engaging methods of protecting our marine resources.

Activity 1.6 Partner with local research and academic institutions to develop facilities and infrastructure to support research and monitoring in the GFNMS.

- A. Partner with Bodega Marine Laboratory to provide office and laboratory space to support sanctuary conservation science programs.
- B. Support the Surface Current Mapping (CODAR) technology in the sanctuary.

STAFFING

Under the direction of the sanctuary superintendent, the sanctuary staff is directly responsible for implementation of the management plan. Although each staff member is assigned to one of the

four program areas or administration, collectively the staff is responsible for coordinating their efforts in addressing the priority resource and ecosystem protection issues identified in the management plan.

STRATEGY AD-2: *The primary focus of GFNMS is ecosystem protection. Basic staffing requirements must provide support for administration and the program areas of conservation science, education/outreach, and resource management.*

Activity 2.1 Sanctuary staff skills should collectively represent expertise in policy, marine resource management, education, outreach, volunteer development, research, monitoring, geographic information systems (GIS), communications technology, and administration. The actual number and expertise of staff will depend on budget allocations and the operating priorities of GFNMS. In order to meet the objectives of this management plan, target staffing requirements have been laid out (see staffing chart). Administration will support the following:

- A. Building leadership in the field.
- B. Increasing professional exposure of the staff.

Activity 2.2 Each staff member must exhibit general knowledge about all GFNMS program areas and the ability to effectively communicate with constituents, other professionals, and the community-at-large. In an effort to attract and maintain a consistent and high caliber staff base, the GFNMS Superintendent will encourage staff participation in professional development such as:

- A. Continuous training
- B. Advancement opportunities
- C. Professional development and attendance at professional meetings and workshops
- D. Staff exchanges with other sanctuaries

Activity 2.3 Collectively, the staff will function as a team supporting each program area, working towards the common goals and objectives of the management plan and increasing protection of sanctuary ecosystems and qualities. Through administration, the following support will be provided:

- A. Team building through on-site activities and off-site retreats.
- B. Define relationship and nature of interactions between staff and management.
- C. Clarify job and program area responsibilities.
- D. Support internal coordination between program areas.

Administration Action Plan
GFNMS Draft Management Plan

- E. Implement a structured staff performance review process.
- F. Facilitate communication and coordination with other sanctuaries.
- G. Clarify relationship between partners and GFNMS.
- H. Provide oversight on achieving goals and objectives.

Activity 2.4 Through the administrative framework, the sanctuary will work to create a positive working environment that encourages transparency, trust and accountability.

- A. Continue staff retreats (see above).
- B. Maintain clear channels of communication among all staff members, and within program teams.
- C. Hold regular, well-planned staff meetings.
- D. Continue regular meetings between program coordinators to ensure cross-program integration and support.

Activity 2.5 Maintain a strong and favorable public identity.

- A. Develop site communications and media plan.
- B. Offer formal media training for site staff.
- C. Submit articles on a quarterly basis for NOAA publications (NOAA Report, Sanctuary Watch).
- D. Develop PowerPoint presentation for GFNMS and specific programs.
- E. Revamp and refine image library.
- F. Develop series of boilerplate press releases.
- G. Encourage headquarters to highlight GFNMS in press releases and publications. Participate in targeted conferences and outreach events.
- H. Improve GFNMS Web presence.

PARTNERSHIPS

With limited staff and financial resources, GFNMS relies on partnerships, outside funding sources and volunteers to assist in the implementation of the management plan. An integrated

approach to ecosystem protection requires direct and broad-based participation in resource management by all parties who have a stake in the long-term health of the region.

STRATEGY AD-3: *With limited staff and financial resources, GFNMS will develop partnerships and identify outside funding sources and in-kind services to assist in the implementation of the management plan.*

Activity 3.1 Continue to maintain and build on existing partnerships.

- A. Continue the Cooperative Agreement with the Farallones Marine Sanctuary Association (FMSA) to support GFNMS education and outreach programs and maintain visitor centers.
- B. Continue the Memorandum of Agreement and long-term occupancy agreement with GGNRA for office space and services.
- C. Revise the Memorandum of Agreement with PRNS for enforcement of sanctuary regulations.
- D. Develop a Memorandum of Agreement with Bodega Marine Laboratory to coordinate on research and monitoring activities and education and outreach opportunities. Explore shared workspace at BML.

Activity 3.2 Expand informal working relationship with NMFS and United States Geological Survey (USGS). Partnership activities include coordination on research projects, data analysis and cruise operations.

STRATEGY AD-4: *The sanctuary advisory council plays an active role in ecosystem protection and provides advice to the sanctuary superintendent.*

Activity 4.1 Strengthen the structure of the sanctuary advisory council by: evaluating and amending as necessary the sanctuary advisory council charter; evaluating and developing organizational strategies to enhance the sanctuary advisory council's level of participation and effectiveness; evaluating and adjusting as necessary the representation of sanctuary advisory council membership; and providing support to help the advisory council continue to evolve their respected voice in the community.

Activity 4.2 Support the role of the sanctuary advisory council in addressing ecosystem protection issues by using their assistance to recommend GFNMS policies and procedures.

Activity 4.3 Provide support, resources, and guidance to help the sanctuary advisory council engage and educate the public about current, new, and emerging ecosystem protection issues in the sanctuary. Develop a strategy to increase public awareness of the advisory council as a way to increase public involvement.

Activity 4.4 Sanctuary advisory council members may choose to serve on various advisory council working groups. Working groups would be convened by the sanctuary advisory council to focus on specific issues and to allow for participation by additional stakeholders and community experts.

Activity 4.5 Add seats to the sanctuary advisory council and support the sanctuary advisory council in creating working groups as needed.

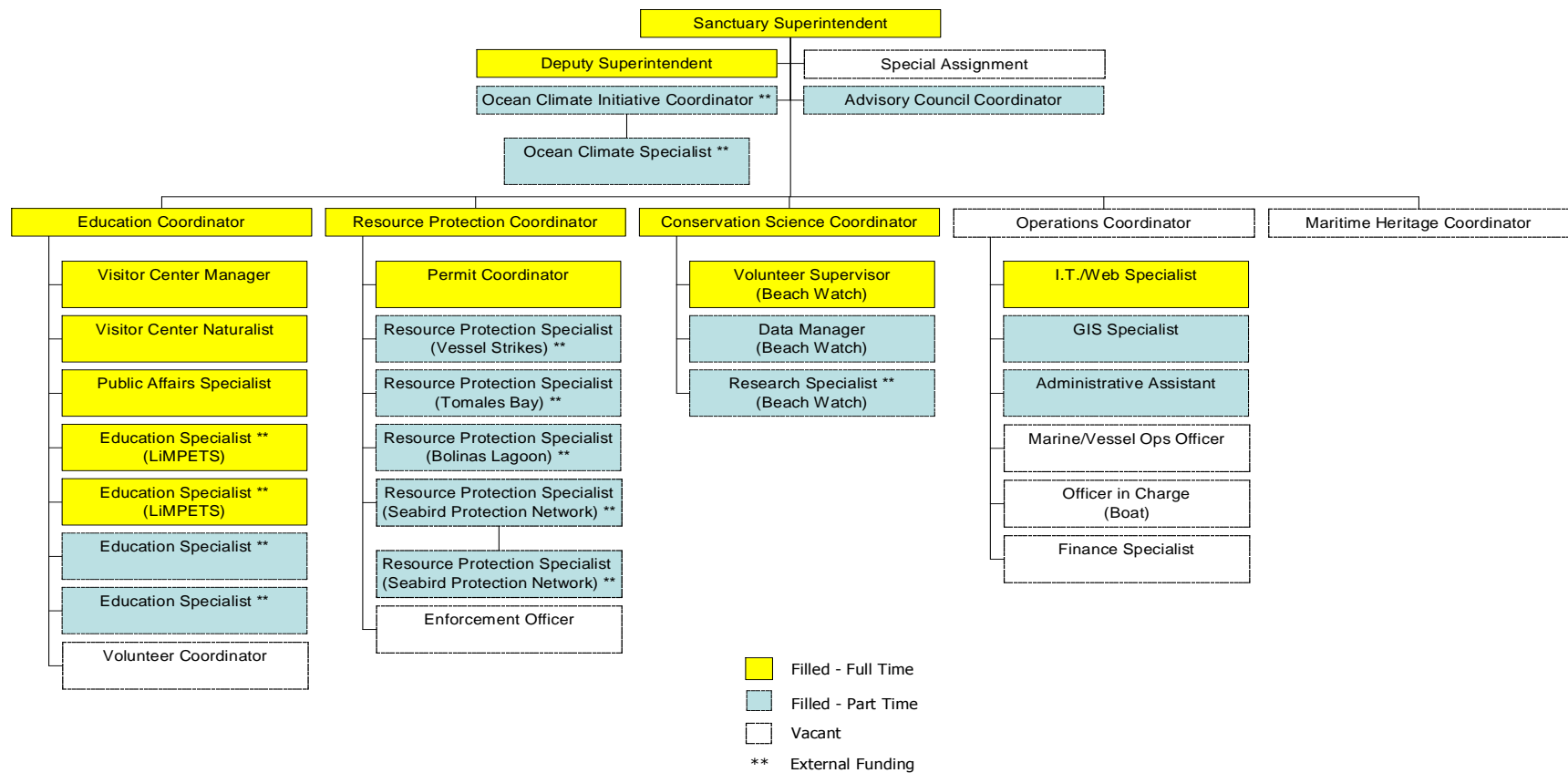
INTERAGENCY COORDINATION

The ONMS and GFNMS are committed to coordinating with other federal, state and local agencies in a continuous ecosystem management process. This process is designed to ensure the long-term protection of the unique ecosystems of this region, while considering the demands of multi-use interests. This requires the cooperation of many institutions that historically have not focused on the same goals. Because of the complexity of managing the activities and cultural resources in the sanctuary, no single agency or institution can effectively meet all sanctuary goals. Overlapping jurisdictions, different agency mandates, and limited resources necessitate the development of a management plan that brings together multiple institutions for the common purpose of ecosystem protection. Achieving the long- and short-term goals for this region requires the development of a close and continuing partnership among all the agencies.

STRATEGY AD-5: *NOAA and GFNMS recognize all other authorities in and around sanctuary waters as important components of effective ecosystem protection. Therefore, GFNMS' regulations complement or supplement, but do not replace, existing authorities. To ensure coordination and cooperation with federal, state, and local jurisdictions within or adjacent to the sanctuary, GFNMS seeks to formalize intra- and interagency efforts.*

Activity 5.1 GFNMS will engage other agencies in reviewing each other's actions, responding to environmental impact statements (EIS), and participating on sanctuary panels and working groups. Building agency relationships allows for: coordinating the development of policies at the federal, state and local level; the sharing of research and education resources; and the opportunity to work together to identify resource management issues.

Staffing Plan: GFN





CROSS-CUTTING ACTION PLANS

GFNMS DRAFT MANAGEMENT PLAN

- I. Cross-Cutting Introduction**
- II. Administration and Operations**
- III. Community Outreach**
- IV. Ecosystem Monitoring**
- V. Maritime Heritage**

CROSS-CUTTING INTRODUCTION

Cordell Bank (CBNMS), Gulf of the Farallones (GFNMS), and Monterey Bay (MBNMS) National Marine Sanctuaries are located adjacent to one another along a 350-mile stretch of the north-central California coast. All three sanctuaries are managed by the Office of National Marine Sanctuaries (ONMS), share many of the same resources and issues, and have some overlapping interest and user groups. There are many opportunities for these sites to work cooperatively, share assets, and address resource management issues in a coordinated manner.

The three sanctuaries coordinate on many important resource management issues, such as oil spills and monitoring. However, each site is, for the most part, managed independently of the others. The three sanctuaries have separate advisory councils and independent education, research and resource protection programs.

In February 2004 ONMS established the Northern Management Area (NMA) of Monterey Bay National Marine Sanctuary extending from the San Mateo/Santa Cruz line northward to the existing boundary between Monterey Bay and Gulf of the Farallones sanctuaries. The Gulf of the Farallones assumed full administrative and management responsibilities of the NMA in March 2004. Existing Monterey Bay sanctuary regulations and congressional prohibitions apply in the Northern Management Area. MBNMS continues to manage its Water Quality Protection Program in San Mateo County. During the Joint Management Plan Review a Northern Management Area Transition Action Plan was developed and published in the 2008 management plans for the respective sanctuaries under the Cross-Cutting Action Plan. Many of the strategies have been implemented since the publication of the plan. Ongoing Strategies have been incorporated into this publication of the Cross-Cutting Action Plan.

GOALS

The goal of the cross-cutting action plans is to build upon existing coordination efforts and identify some activities that should be jointly implemented so that these three sites can operate as integrated and complementary sites to better protect the sanctuaries' resources. This will ensure scarce program resources are used more efficiently and result in a more consistent and coordinated delivery of programs, products and services to the public. Cross-cutting actions plans were developed to address: Administration and Operations; the Northern Management Area; Community Outreach; Maritime Heritage; and Ecosystem Monitoring. Though the implementation of other activities contained in the site-specific plans may also be effectively coordinated, the cross-cutting action plans would be jointly developed and implemented across the three sites.

IMPLEMENTATION WITHIN THE CONTEXT OF A REGIONAL STRUCTURE

ONMS efforts to address certain priority issues in a cross-cutting framework was a first step in a larger effort to begin looking at sanctuary resource management issues in a regional or ecosystem-based context. Since the cross-cutting plans were developed, the ONMS adopted a regional management structure, comprised of four regions, including a West Coast region, which is led by a regional director. The purpose of this structure is to maximize program integration among the ONMS sites, regions, and national program and to other state and federal programs and partners – across all levels. The regional structure dedicates program leadership and regional staff resources directly towards integrating programs and forging partnerships that supports NOAA’s evolving ecosystem-based management approach.

The regional director and staff are based in the region and dedicate their efforts towards addressing priority regional issues and capitalizing on regional opportunities and partnerships. Some of their expertise and responsibilities includes working closely with individual sanctuary staff to coordinate the implementation of certain cross-cutting action plans or projects, such as regional ecosystem monitoring, community outreach, or maritime heritage. Individual sanctuaries may also either take or share the lead for implementing the cross-cutting action plans.



ADMINISTRATION AND OPERATIONS CROSS-CUTTING ACTION PLAN

GOALS

The goals of the cross-cutting Administration and Operations Action Plan are to (1) improve and sustain coordination and cooperation across the three sanctuaries to better and more efficiently manage and protect sanctuary resources, and (2) for the individual sites to continue working and functioning as an integrated team. Fulfilling these goals for the three sanctuaries requires enhanced communication and collaboration among and between superintendents and program staff.

ISSUE DESCRIPTION

During scoping meetings for the JMPR, the ONMS received many comments relating to the need to coordinate various administration and operations across the sites. The three advisory councils and sanctuary staff identified several of these issues as priority items to address in the management plan review. These include:

- Improving resource management consistency and efficiency
- Expanding coordination and communication between sites and to the public
- Evaluating emergency response capabilities in the region, and clarify and coordinate the sanctuary's role in relation to other agencies
- Developing a mechanism to address current and emerging issues between the sites
- Coordinating research/monitoring, education/outreach, and enforcement activities

ADDRESSING THE ISSUE

Each of the three sanctuaries developed site-specific administration and operations action plans to address the staffing and infrastructure needed in order to implement their new management plans. In contrast, this cross-cutting administration and operations plan targets some activities that will be implemented by all three sites in order to improve communication and maximize their ability to collaborate and cooperate on many important resource management and program areas.

STRATEGY XAO-1: *Improve internal communications among the three sanctuaries.*

Successful collaboration and coordination among sanctuaries is related to the amount and intensity of communication. This strategy focuses on improving communications between the

Administration and Operations Cross-Cutting Action Plan
GFNMS Draft Management Plan

sites to ensure there are regular opportunities for the superintendents, staff and the advisory councils to learn what is happening at each of the three sites and jointly plan regional programs and activities.

Activity 1.1 Maintain regular communications between the sanctuary superintendents.

Superintendents will engage in informal (impromptu phone calls) and formal (regularly scheduled calls or meetings) communications. GFNMS and MBNMS superintendents will meet monthly by phone to discuss common issues.

Activity 1.2 The west coast superintendents will meet monthly by phone with the West Coast Region staff to discuss regional issues and will meet annually in person to develop annual regional priorities.

Activity 1.3 Maintain a new employee orientation program that includes information from the three sanctuaries and the ONMS.

If funding allows, the orientation program will include travel to the other sites to meet staff and learn about their program and activities. These efforts should be coordinated with similar efforts at headquarters.

Activity 1.4 The program coordinators will meet at least once per year to share information and plan joint activities prior to the development of the annual operating plans.

In cooperation with the regional office, the regional lead for each program will facilitate bringing this group together, either via conference call or in person if budgets allow.

Activity 1.5 Schedule annual joint advisory council chair and sanctuary superintendent meeting.

The MBNMS and GFNMS advisory councils currently meet biannually to discuss issues and program activities in the MBNMS NMA. GFNMS and CBNMS advisory councils will meet jointly on an annual basis to discuss the expansion area.

Activity 1.6 Encourage and provide opportunities for site staff to give presentations at each other's advisory council meetings.

Superintendents, council chairs and coordinators should encourage program staff presentations at each other's meetings.

STRATEGY XAO-2: Improve the efficiency and cost-effectiveness of program operations and administration.

Each of the three sanctuaries has been designated for over twenty years and during this time has accumulated an inventory of equipment, vessels and resources to support their own research/monitoring, education/outreach, and resource protection programs. This strategy recognizes there are instances in which it is more cost-effective to share resources among the

sites and some instances when it may be more appropriate for each site to have their own. Currently each sanctuary office is responsible for managing most of its own administration and information technology functions, including contracts, procurements, time and attendance, travel orders and vouchers, websites, databases, and geographic information systems. Each site employs a varying number of staff or contractors to perform some of the administrative tasks. The goal of this strategy is to evaluate the staffing plans at the sites and maximize opportunities to share personnel and implement methods to make routine administrative functions more efficient. The strategy also highlights the importance of building upon existing efforts to share information technology resources.

Activity 2.1 Contact and inform the other sites early in the planning stages of field operations to provide opportunities to plan joint missions and to share information and data.

Individual sites may have program personnel, technology or information that would benefit the field operations of another site.

Activity 2.2 As opportunities arise, create short-term opportunities for staff exchanges, rotations, details and informal staff loans for specific projects or to fulfill on-going needs across the West Coast Region.

In addition to sharing valuable technical expertise, staff exchanges provide opportunities for professional development of program staff.

Activity 2.3 Participate in each other's interview panels to review candidates for new and vacant positions, where possible.

This is particularly important when hiring for positions that work with other sites on a regular basis.

Activity 2.4 Cordell Bank and Gulf of the Farallones superintendents and other planning staff will discuss administrative and operational needs and expectations related to the expansion area.

Staff will meet to determine needs and best opportunities for efficiency in addressing the management of the new expansion area. This relates to all programs, shared staffing, and budget allocation across the two sites.

Activity 2.5 Evaluate alternative management strategies for offshore portions of northern expansion areas.

GFNMS and CBNMS superintendents and WCRO will conduct a series of discussions regarding the most efficacious means to manage the offshore portions of the expanded areas of GFNMS and CBNMS, ensuring effective marine science, outreach and resource protection.

STRATEGY XAO-3: *Improve the coordination of sanctuary resource protection activities and programs.*

Administration and Operations Cross-Cutting Action Plan
GFNMS Draft Management Plan

Each of the three site-specific management plans proposes various strategies to address their own resource protection programs (e.g., regulations/permitting, emerging issues, enforcement, emergency response). This strategy is aimed at improving the communication and coordination of resource protection activities across the three sites. The strategy addresses the need to improve staff understanding and awareness of all of the three sites' regulatory and permit processes and activities. Secondly, it establishes a process to identify and, when appropriate, jointly address emerging issues in a regional capacity. This includes coordination with local, state and other federal entities. Third, it recommends the development of a regional sanctuary emergency response plan so that the ONMS is better prepared to address emergencies on a regional scale. Finally, it identifies the need to comprehensively evaluate enforcement needs in relation to the new management plans and develop and implement a regional enforcement plan.

Activity 3.1 Improve staff awareness and understanding of each site's regulations.

Establish a basic and consistent understanding of each site's regulations. Ensure all staff have and are familiar with the portion of the WCRO web page which consolidates the management documents for the West Coast Region: regional regulations, terms of designation and management plans. Produce a table listing all regulations of West Coast sanctuaries.

Activity 3.2 The West Coast sanctuaries will continue to work closely on any future proposed regulatory changes that could affect other sites. The GFNMS and MBNMS Resource Protection Teams will closely coordinate on any future proposed regulatory changes that could impact the NMA.

Activity 3.3 GFNMS will facilitate a public process in the next five years to consider whether the San Francisco Exemption Area should be incorporated into the MBNMS.

Such an action would require changing the MBNMS regulations and designation document and require coordination with MBNMS staff, and approval from the MBNMS Superintendent. Public scoping for this process was initiated in 2012.

Activity 3.4 The West Coast sanctuaries will share responsibilities for preparing regional permits. GFNMS will be responsible for permit activities in the NMA.

West Coast sanctuaries will inform each other of any new permit applications or other activities that could affect any of the sanctuaries. GFNMS will process permits within the NMA, except for water quality permits, which will continue to be overseen by MBNMS.

Activity 3.5 MBNMS staff will continue to implement Water Quality Protection Program activities including conducting site water quality needs assessment, review water quality permits and authorizations.

MBNMS Water Quality staff will participate on Technical Advisory Committees that implement strategies within the WQPP Action Plans, implement volunteer water quality monitoring events including First Flush and Snapshot Day, review and comment on NPDES permits, respond to

discharges entering the MBNMS NMA, coordinate and collaborate with partners participating in the Agriculture Water Quality Alliance, and oversee monitoring of Areas of Special Biological Significance in a sub-contract to the San Mateo Resource Conservation District.

Activity 3.6 Coordinate emerging issues among the West Coast sanctuaries and develop coordinated strategies to address emerging issues

As an individual site staff identifies emerging issues, staff members will determine the significance and potential to impact another site, and communicate this to the potentially affected site(s). They will jointly determine if a new or emerging issue needs action and identify a strategy and activities to address the issue, depending on whether it is an immediate or long-term threat, what is (or is not) known about it, and if there are adequate resources to address it properly.

Activity 3.7 Implement West Coast Region emergency response plan.

The West Coast Region emergency response plan addresses broad emergency response issues that affect the region, identifies ONMS staffing responsibilities and expertise, and outlines how the ONMS will coordinate with existing federal, state and local emergency response agencies in California. GFNMS staff will lead efforts to coordinate and implement site-specific activities to respond to emergencies in the NMA.

Activity 3.8 Coordinate with the ONMS Damage Assessment Team on populating and making the Southwest Environmental Response Application (ERMA) functional and operative for the three sanctuaries and integrating it with the existing SIMoN database.

Activity 3.9 Continue to work closely on enforcement activities in the region.

Regional enforcement staff will coordinate and cooperate on enforcement activities as they relate to other sites. GFNMS staff will provide assistance as appropriate in the planning and implementation of enforcement activities in the NMA and will coordinate with MBNMS to ensure consistency across sites.

TABLE XAO-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING ADMINISTRATION & OPERATIONS ACTION PLAN

Desired Outcome(s) For This Action Plan:	
Improved communication and coordination among Sanctuary staff resulting in more integrated and coordinated resource protection for Sanctuary resources.	
Performance Measures	Explanation
Increase the number of cross-cutting Annual Operating Plan (AOP) activities that each site includes in their site-specific AOP each year.	One of the primary purposes of this action plan is to increase the amount of communication and interaction among the three sites. This action plan identifies specific opportunities for staff to interact, resulting in more coordinated planning and implementation of joint activities that address priority issues. The tangible results of these interactions will be formulated within each site's AOP.

KEY PARTNERS

CBNMS, GFNMS, and MBNMS (superintendents, program coordinators, and site staff); Advisory Councils Chairs for CBNMS, GFNMS, and MBNMS; General Council Ocean Service (GCOS); NOAA OLE; NOAA General Counsel Enforcement Section (GCES); NOAA Hazardous Materials (HAZMAT); United State Coast Guard (USCG); National Park Service (NPS); California State Parks; California Department of Fish & Wildlife; California State Lands Commission (CSLC); and County Sheriff Departments.



COMMUNITY OUTREACH CROSS-CUTTING ACTION PLAN

GOAL

A coordinated, collaborative regional community outreach strategy will build awareness throughout north-central California and beyond about (1) the existence and purpose of the three sanctuaries, the West Coast region, and the ONMS; (2) the diverse natural resources and ecosystems of each sanctuary and why they need protection; (3) the relevance of these ecosystems to people; (4) the economic and intrinsic value of the three sanctuaries to coastal and inland communities beyond such direct industries as fishing and ecotourism; (5) how these three sanctuaries are working with constituent groups; and (6) how individuals and groups can be engaged in helping the sanctuaries accomplish their resource protection, research, and education goals.

ISSUE DESCRIPTION

Under the ONMS, each sanctuary in the system conducts education and outreach activities to build broad public awareness about the existence and purpose of our nation's marine sanctuaries. The ONMS recognizes a well-informed local, regional, and national constituency greatly enhances the ability of the sanctuaries to protect their natural and cultural resources. Therefore, outreach activities should provide local and state governments, businesses, non-governmental organizations, constituent groups, and the general public with the information necessary to be effective partners in the stewardship of sanctuary resources.

This cross-cutting action plan identifies appropriate regional audiences and topics, regional outreach strategies, and marketing and media exposure efforts that effectively highlight specific program activities across all three sites, the region and the national system. It is also designed to complement each site-specific program and to be flexible enough to incorporate new strategies and topics over time.

Effective community outreach is accomplished through a continuous cycle of ocean and coastal outreach, education, and stewardship. Community outreach expands awareness, knowledge and ultimately changes attitudes and behaviors. By finding information on ocean and coastal resources, and stewardship opportunities in which to get involved in the sanctuary, people begin to have a personal relationship with the sanctuary and may be more likely to become ambassadors helping to protect sanctuary resources. Community outreach involves three strategies tailored to the specific needs and interests of a given audience and may be delivered by members of that audience.

- Outreach provides audiences with sanctuary-related information and materials promoting ocean and coastal stewardship.
- Education provides fundamental scientific understanding, knowledge, training, or professional development on topics relevant to the world's atmosphere, climate, oceans and coastal ecosystems, and resource protection.
- Stewardship is a personal sense of responsibility to take informed action and make caring choices, at home or work, which promote and protect the health of our coasts and oceans.

STRATEGY XCO-1: *Build upon and expand existing ocean and coastal outreach*

This strategy is aimed at raising general awareness of marine ecosystems, individual national marine sanctuaries and the national marine sanctuary system, and inspiring stewardship of ocean and coastal resources. Outreach provides audiences with sanctuary-related information and materials based on NOAA science, products, and services that promote ocean and coastal stewardship. These audiences may be: north-central California coastal residents; people who live and work in inland California communities that regularly visit the ocean, such as divers, kayakers, tidepoolers, etc.; those who make their living within the ocean environment, like fishermen, maritime shipping companies, etc.; or people who live outside California that care about the ocean even though they may never visit. These, and others, are important voices in the protection and stewardship of the oceans. Key target audiences and messages should also be closely coordinated with outreach needs identified in the issue-related action plans.

Activity 1.1 Develop or strengthen coordinated regional outreach programs and opportunities.

Outreach staff should coordinate on public service announcements, issue-specific workshops and brochures (e.g., tide pool etiquette), docent programs, signage, learning centers, exhibits and displays at community events that encompass or represent the region.

Activity 1.2 Plan and conduct regional sanctuary outreach events.

Outreach staff should promote the importance of national marine sanctuaries, conservation science and resource protection programs, working together to improve understanding of marine conservation and management.

Activity 1.3 Develop and implement joint media communications plan, e.g., print, radio, TV, Internet.

Media personnel at respective sites should coordinate with the WCRO media liaison to develop a plan.

Activity 1.4 Identify and partner with external programs and partners to incorporate sanctuary-related messages, identify best practices and achieve common goals.

Regional outreach personnel should work together to target partners and programs that can effectively communicate ONMS messages on a regional level, and assign appropriate leads to initiate contact and follow-up.

STRATEGY XCO-2: *Enhance and coordinate ocean and coastal education*

This strategy focuses on building community knowledge and fostering caring actions and attitudes targeting priority issues identified in the management plans. The ONMS's joint ocean and coastal education efforts provide a fundamental understanding grounded in science, knowledge, training, and/or professional development to a particular audience on topics identified as important to protect sanctuary resources. There are many possible audiences such as students, teachers, state and local agencies, community leaders, and the general public. Sanctuary-related educational activities are based on NOAA science, systematic in design with clear goals, objectives and measurable outcomes; aligned, where appropriate, with state or national education standards; and designed to facilitate evaluation by a third party.

Activity 2.1 Collaborate on existing site-specific education programs and products as a means to enhance and expand educational offerings.

Each year, the education staff will jointly meet to identify collaborative projects for inclusion in their respective AOPs.

Activity 2.2 Take a multicultural/multilingual approach to all outreach efforts.

Assess demographics of geographic areas with programming and ensure multicultural relevance to diverse audiences. Develop multicultural educational curricula and materials in response to demographic assessment.

Activity 2.3 Identify and implement new education programs that can be developed jointly with other sites.

Education leads should identify and implement new programs as needs arise and as budgets allow.

STRATEGY XCO-3: *Enhance ocean and coastal stewardship*

Marine sanctuary stewardship is a personal sense of responsibility to take informed action and make caring choices, at home or work, which promote and protect the health of our coasts and oceans. A steward develops attitudes, motivations, and commitments that are reflected in informed decisions and responsible actions. Stewards can be individuals, members of groups, or entities that influence others' opinions and actions about the oceans. Stewardship can be demonstrated through a variety of means, including:

- Volunteering for an organized stewardship program,
- Taking personal action to protect our ocean sanctuaries,
- Providing informed public input into decisions regarding the sanctuaries, and

- Informing others regarding marine ecosystems and the sanctuary program.

Similar to the audiences for outreach, ocean and coastal stewards may be north-central California coastal residents, people who live and work in inland California communities that regularly visit the ocean, those who make their living within the ocean environment, or people who care about the ocean even though they may never visit.

Activity 3.1 Create, maintain and promote sanctuary and partner volunteer programs.

Cultivate volunteers to provide opportunities for stewardship as well as expand resource protection, education, and outreach capabilities of the three sanctuaries.

Activity 3.2 Create new ways to inspire coastal and ocean stewardship in local communities.

The three sites will conduct needs assessments with targeted constituents and audiences to identify innovative and creative methods of engaging specific groups of people in sanctuary activities. Some examples include working with tourism industry, faith-based or cultural organizations, retired citizens or local art groups.

Activity 3.3 Identify partners to incorporate stewardship messages.

Regional outreach personnel should work together to target partners that can effectively communicate ONMS stewardship messages, and assign appropriate leads to initiate contact and follow-up.

Table XCO-1: Measuring Performance of the Cross-Cutting Community Outreach Action Plan

Desired Outcome(s) For This Action Plan:	
Expand joint education and outreach efforts in a manner enhancing protection for Sanctuary resources and the delivery of programs and services to local communities.	
Performance Measures	Explanation
Increase the number of joint education and outreach efforts directed at communities	One of the main purposes of this action plan is to expand general awareness of the three sanctuaries, develop joint education products addressing priority issues, and increase involvement of individuals in the stewardship of the resources in the three sanctuaries. Some of the programs directed at local communities include schools and teachers, volunteers, fairs and festivals, visitor centers, public lecture series, etc.

KEY PARTNERS

CBNMS, GFNMS, MBNMS, CINMS, OCNMS, West Coast Region Office, NMFS, NOAA OLE, USCG, NPS, USEPA, California Coastal Monument, other federal agencies, California State Parks, Elkhorn Slough National Estuarine Research Reserve, other state agencies, Association of Monterey Bay Area Governments, Association of (SF) Bay Area Governments, Sonoma County Regional Parks, cities, local parks/recreation departments, Advisory council members from all three sanctuaries/working groups, FMSA, Monterey Bay and Channel Islands Sanctuary Foundation, Stewards of Coast and Redwoods, Fort Ross Conservancy, local NGOs/non-profits, Save Our Shores, The JASON Project, SIMoN, Community Outreach Working Group, Snapshot Day Water Quality Monitoring Event, Long-term Monitoring Program and Experiential Training for Students (LiMPETS), Beach Watch, Beach Coastal Ocean Mammal/Bird Educational and Research Survey (Beach COMBERS), MBNMS Team Ocean Conservation Education Action Network (OCEAN), Global Learning and Observation to Benefit the Environment (GLOBE), Bay Net, traditional and electronic media (both coastal and inland, local and national, including local weekly papers, community access TV stations, social media), California Ocean Communicators Alliance (Thank You Ocean), pollution prevention programs, chambers of commerce, shipping trade associations, tourism trade associations, dive clubs/shops, kayak clubs/shops, spot abalone divers, other recreational groups, natural history museums, institutions with community service requirements/marine sciences (high schools, colleges), state/local volunteer programs, high school/college classes doing coastal monitoring, multicultural community leaders, and bilingual school programs.



ECOSYSTEM MONITORING CROSS-CUTTING ACTION PLAN

GOALS

The cross-cutting goal of coordinated ecosystem monitoring across CBNMS, GFNMS and MBNMS is to better (1) determine the current and anticipate the future status of sanctuary resources; (2) understand the limits of variation in resources; (3) detect temporal and spatial changes in resources; (4) identify potential agents of change; and (5) provide scientific information that can guide management decisions on priority issues.

INTRODUCTION

One of the express purposes and policies of the National Marine Sanctuaries Act is that long-term monitoring of sanctuary resources be supported, promoted, and coordinated (16 U.S.C. 1431). Sanctuaries also promote data collection to assess resource or environmental change with respect to implemented management actions. The suite of monitoring information required by sanctuary management includes data from within the sanctuary and from areas outside the boundaries that influence sanctuary waters.

For the most part, individual sanctuaries work independently to develop monitoring programs and partnerships to inform their management concerns. These programs typically rely on substantial support from other government, private, and academic institutions at the federal, state, and local levels. The program designs are often only indirectly influenced by sanctuary management responsibilities.

Undertaking ecosystem monitoring requires long-term comprehensive assessments and broad scale integration of data collected in a wide variety of habitats (e.g., coastal interface, subtidal, continental shelf, shelf break, and deep water) and in areas that directly influence them (e.g., watershed, estuaries, coastal currents). Such assessments and integration can only be achieved through coordination with multiple partners focused on a variety of resources and geographic scales. Because the three sanctuaries of Cordell Bank, Gulf of the Farallones, and Monterey Bay have contiguous boundaries, they protect and manage many of the same habitats types and living resources, some of which range throughout the combined area. As such, the sanctuaries should consider each other as primary partners in monitoring efforts to evaluate the status and trends of these shared resources. Coordination among the three sanctuaries to promote, conduct, integrate, and synthesize data from ecosystem monitoring activities is the most effective and efficient means to improve availability of information for resource conservation and management across the region.

The combined areas of CBNMS, GFNMS and MBNMS also represent a substantial portion of California coastal waters. Regional sanctuary monitoring coordination across this extensive area will help promote sanctuary management concerns as a driver for large-scale monitoring initiatives and partnerships. The data collected from coordinated efforts will be useful at the local and regional scale, with the potential for influencing resource management actions throughout a substantial portion of the West Coast.

ADDRESSING THE ISSUE

Most of the monitoring data that informs sanctuary management are not financed, collected, or analyzed by the sanctuaries. Instead, sanctuaries support and promote these activities indirectly by providing vessel time, staff support, and equipment, and coordinating the interests and information of outside agencies and partners. They also assist in securing outside funding that can be directed toward projects that address sanctuary information needs such as SIMoN.

Indirect support is appropriate to enhance capacities of the sanctuary programs to meet the mandate of resource protection. Such expertise to collect and analyze the variety of information required for management needs is accessible through partnerships with various research institutions. However, effective resource management requires a holistic view, which sanctuaries are uniquely positioned to achieve. To meet their resource management mandate, sanctuaries must synthesize and integrate information from disparate research and monitoring projects. They have the further responsibility of interpreting and applying available scientific knowledge for resource managers and the public. Thus, coordination of ecosystem monitoring efforts requires strategic action on various sanctuary-specific programmatic levels.

Recommended strategies focus on coordinating existing activities, identifying opportunities for additional coordination, and establishing the administrative infrastructure, advisory panels, and oversight mechanisms required to support, direct, and evaluate coordinated monitoring across the three sanctuaries. Because many of the monitoring requirements common to CBNMS, GFNMS, and MBNMS overlap with the interests of CINMS and OCNMS, the strategies recommended in this proposed action plan should serve as a model for expanded coordination of appropriate monitoring activities across all five of the West Coast sanctuaries. The strategies are also consistent with efforts of the System Wide Monitoring Program (SWiM) to improve collection, evaluation, and interpretation of monitoring information throughout the sanctuaries. Thus, these activities promote system and regional integration across the program as well as improving ecosystem conservation and management in the combined area of the three sanctuaries.

STRATEGY XEM-1: Coordinate existing targeted monitoring activities to promote greater efficiency and effectiveness.

Priority activities for initiation of joint ecosystem monitoring within the region should be focused on the coordination of existing sanctuary-specific monitoring programs that assess similar ecosystems in at least two of the three sanctuaries. This includes coordinating targeted programs that monitor conditions in the coastal interface and the pelagic/offshore systems.

These priorities are based on the need to establish common ecological monitoring efforts throughout the region and the priority issue areas identified in the management plan that could best be addressed through a coordinated approach among the sanctuaries. Some of the priority habitats that have been identified for joint monitoring include: rocky intertidal shores, deep sea benthos and pelagic/open ocean. The coordination channels and activities established to support these targeted efforts could serve as a model for additional monitoring coordination in the future. Other existing or newly emerging monitoring activities, not identified in this action plan, represent potential opportunities for additional coordination. Assessment of such opportunities is addressed in Strategies XEM-2 and XEM-3.

Activity 1.1 Regional science staff should coordinate regarding intertidal monitoring programs.

Coordinate individual sanctuary rocky intertidal monitoring programs and continue to collaborate with other large-scale rocky intertidal monitoring efforts, such as PISCO and MARiNe.

Activity 1.2 Beach Watch and Beach COMBERS will continue to collaborate on sharing information on the health of seabirds and trends in beachcast wildlife.

GFNMS Beach Watch staff should evaluate the feasibility of expanding existing citizen science monitoring in the expansion area.

Activity 1.3 Maintain and expand ACCESS integrated sanctuary marine mammal, seabird and sea turtle surveys.

CBNMS and GFNMS science staff should evaluate the feasibility of expanding existing at-sea monitoring to the expansion area.

Activity 1.4 Regional science staff should coordinate regarding benthic habitat surveys.

Jointly develop research cruise plans and standards for sampling and reporting results for benthic habitat survey work. Augment the benthic habitat survey work with new technologies such as ROV and AUV surveys.

STRATEGY XEM-2: *Implement existing regional ecosystem monitoring activities.*

Over the last decade, many federal and state agencies have actively participated in collaborative efforts to develop and implement integrated coastal and ocean observing and data management systems. To further these efforts, the ONMS, and many individual sanctuaries, have been working closely with their partners to build upon and integrate existing site monitoring programs into regional ecosystem monitoring programs. The following activities have been identified as pilot programs within the ONMS to test the concept of integrating observation data and making it available to resource managers and the public.

Activity 2.1 Continue the West Coast Observation Project at CBNMS, GFNMS and MBNMS.

The West Coast Observation Project integrates ocean observation data collected at OCNMS, CBNMS, GFNMS and CINMS. The project focuses on data streams collected at numerous new instrument moorings installed at specific locations within each of the four sanctuaries. The project intends to make the monitoring data accessible via the Internet in an IOOS compatible format. The data from this project would be best shared through the Central and Northern California Ocean Observing System (CeNCOOS).

Activity 2.2 Develop and implement an integrated Sanctuary System-Wide Monitoring (SWiM) program for CBNMS, GFNMS and MBNMS by publishing Condition Reports and collaborating with CeNCOOS.

The primary purpose of the SWiM program is to monitor specific ecological parameters of the sanctuary and ensure the timely flow of data and information to those responsible for managing and protecting resources in the ocean and coastal zone, and to those that use, depend on, and study the ecosystems encompassed by the sanctuaries. It also provides a reporting strategy, through Condition Reports, to enable the evaluation of status and trends in protected resources and activities that affect them. These efforts will be integrated with SIMoN, which implements the monitoring, coordinates with partners, and provides GIS, Web and other products that allow for local and regional information sharing, as well as through CeNCOOS.

Activity 2.3 Continue expanding the Sanctuary Integrated Monitoring Network (SIMoN).

SIMoN is the primary mechanism to coordinate data and information among the sites. CB, GF and MBNMS have their monitoring projects summarized with available data and images on the SIMoN website. This information is linked to the National Program monitoring summary. Joint interactive maps, images and “what’s new” items are also available. Project information and new cross site tools will continue to be developed as needed.

Activity 2.4 Look for partnerships to support ecosystem monitoring.

Collaborate with NMFS on the California Current Integrated Ecosystem Assessment and integrate this into SIMoN ecosystem assessments.

Activity 2.5 Look for innovative ways to support ecosystem monitoring.

Evaluate and identify ongoing funding opportunities to support regional and larger scale ongoing monitoring activities.

STRATEGY XEM-3: *Establish a joint internal monitoring coordination team.*

Coordination of monitoring activities among the sanctuaries requires an administrative infrastructure to identify and act on cross-boundary opportunities, collaborate with large-scale initiatives, and interpret the results for resource managers and public audiences across the region.

Activity 3.1 Continue to coordinate research and monitoring across CBNMS, GFNMS and MBNMS.

CBNMS, GFNMS, and MBNMS coordinate on the use of the research vessel FULMAR. In addition, GFNMS and CBNMS coordinate and partner on offshore monitoring which includes the NMA. Finally, monitoring information from all sites is shared through the SIMoN web page and interactive maps.

Activity 3.2 The CBNMS, GFNMS, and MBNMS science staff will continue to work jointly with the site and West Coast Region media staff to develop a research and communications plan

Activity 3.3 Develop annual ecosystem-based research and monitoring operating plans in collaboration with each other to meet site, regional, and national monitoring needs. CBNMS, GFNMS and MBNMS science staff should share research and monitoring information between sites as annual operating plans are developed.

TABLE XEM-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING ECOSYSTEM MONITORING ACTION PLAN

Desired Outcome(s) For This Action Plan:	
Increased collaboration among, capacity of, and productivity of the three sanctuary monitoring programs in order to enhance our understanding of the ecosystem(s) in this region and those natural and human factors affecting them.	
Performance Measures	Explanation
<p>1. Increase the number of cooperative research and monitoring activities.</p> <p>2. Continue to include Cordell Bank and Gulf of the Farallones in SIMoN and expand its infrastructure so that it can be integrated with other coastal and ocean observation systems along the West Coast.</p> <p>3. Design and implement coordinated monitoring programs consistent with the ONMS System Wide Monitoring Framework (SWiM) at each site.</p>	<p>1. Research staff from the three sanctuaries currently engage in limited joint research and monitoring activities. However, to improve our knowledge and understanding about the broader ecosystem in this region, the three sites need to coordinate and systematically plan and implement joint research and monitoring activities with each other and other partners. These new joint research and monitoring activities will be reflected in each sites' AOP.</p> <p>2. SIMoN is rapidly evolving into a system-wide tool for organizing and displaying research and monitoring related information for MBNMS, GFNMS, and CBNMS. In addition, SIMoN has evolved so other regional coastal and ocean observation systems could be integrated within SIMoN.</p> <p>3. The ONMS has been working for several years to develop a System Wide Monitoring (SWiM) Program Framework. The program is underway and ready to be implemented at MBNMS, GFNMS, and CBNMS, particularly through Condition Reports..</p>

KEY PARTNERS

CBNMS, GFNMS, MBNMS, CINMS, OCNMS, WCR), NCCOS, NMFS, NESDIS, National Coastal Data Development Center (NCDDC), National Oceanographic Data Center (NODC), National Data Buoy Center (NDBC), NOAA National Estuarine Research Reserve System (NERRS), advisory councils, NPS, USEPA, USFWS, BOEM, USGS, BML, University of California-Santa Cruz (UCSC), State of California, Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), Multi-Agency Rocky Intertidal Network (MARINe), Southern California Coastal Water Research Project Authority (SCCWRP), Tenera Inc., Kinetic Labs, Inc., SIMoN, Coastal Observation and Seabird Survey Team (COASST), California Cooperative Oceanic Fisheries Investigations (CalCOFI), Monterey Bay Aquarium Research Institute (MBARI), Alliance for California Current Ecosystem Observation (ACCEO), NCDFW, Ocean-US, SWiM, Southeast Area Monitoring and Assessment Program (SEAMAP), Integrated Ocean

Observing System (IOOS), CeNCOOS, MBNMS RAP, CBNMS RAP, FMSA, Monterey Bay and Channel Islands Sanctuary Foundation, and PRCS.



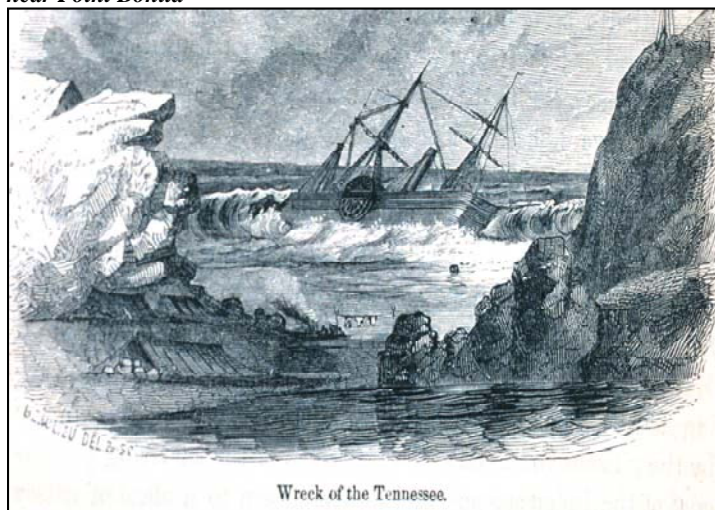
MARITIME HERITAGE CROSS-CUTTING ACTION PLAN

GOALS

The ONMS has developed the Maritime Heritage Program (MHP), to identify, protect and raise awareness of the cultural and historical resources in sanctuaries. The MHP's efforts include conducting paleo-ecological and archaeological studies; inventorying, locating, and monitoring both historic shipwrecks and those that pose an environmental threat to sanctuary marine resources; and characterizing and protecting maritime heritage resources.

This cross-cutting plan provides the framework for a maritime heritage resources program that addresses historic and cultural underwater sites, as well as traditional heritage resources such as Native American and fishing communities, commercial marine transport of passengers and cargo, and recreational activities like diving, surfing, and boating. This maritime cultural landscape of the region involves understanding the broader context of specific places that encompasses human activities. This includes indigenous people of our nation's pre-historic and historic past as well as today's modern cultures and their sacred places; geography; paleontology; archaeology; traditional knowledge and sociocultural studies; oral traditions; commercial and recreational fisheries; recreation activities, maritime heritage resources such as lighthouses, piers, wharves, lifesaving stations, abandoned dog-hole ports and landings and working waterfronts, revealing the many human communities that overlap with marine environments in our national marine sanctuaries and contiguous waters. Although the ONMS only has authority to protect sanctuary cultural and historic resources, the program recognizes that traditional user and ocean-dependent groups are interconnected with the sanctuaries and are an integral part of their history.

Figure MH-1: The passenger-cargo steamer Tennessee runs aground near Point Bonita



ISSUE DESCRIPTION

The NMSA and site regulations mandate the management and protection of sanctuary cultural and historical resources. Cultural resources are defined as any historical or cultural feature, including archaeological sites, historic structures, shipwrecks, and artifacts. *Historical resources* are defined as any resources possessing historical, cultural, archaeological or paleontological significance, including sites, contextual information, structures, districts, and objects significantly associated with or representative of earlier people, cultures, maritime heritage, and human activities and events. Historical resources include “submerged cultural resources,” and also include “historical properties,” as defined in the National Historic Preservation Act (NHPA), as amended, and its implementing regulations, as amended.

The area encompassed by CBNMS, GFNMS, and MBNMS has a long and interesting maritime history. The sea floor preserves remnants of the sites where people lived and of the vessels in which they conducted trade and fought wars. Ships, boats, wharves, lighthouses, lifesaving stations, fort, dog-hole ports, whaling stations, prehistoric sites, and a myriad of other heritage treasures lie covered by water, sand, and time in GFNMS and MBNMS. To date, no submerged cultural or historic resources have been discovered in CBNMS.

The history of California’s north-central coast is predominantly a maritime one. From the days of the early Ohlone, Coast Miwok, and *Kashia* Pomo inhabitants to the exploration and settlement of California to the present, coastal waterways remain a main route of travel, subsistence, and supply. The heritage of the first peoples has been and is today represented not only in the sites of former settlements but also by the traditions and heritage of those people, who have persisted as important members of the coastal community. Their place names, their memories and their traditions remain on these shores and waters whether written on a map or not.

Ocean-based commerce and industries (e.g., fisheries, shipping, military, recreation, tourism, extractive industries, exploration, research, and aesthetics) are important to the maritime history, the modern economy, and the social character of this region. These constantly changing human uses define the maritime cultural landscape of these sanctuaries and help interpret our evolving relationship with the sanctuary resources. Ports such as San Francisco and Monterey, and smaller coastal harbor towns, developed through fishing, shipping, and economic exchange. Today these have become major urban areas, bringing millions of people in proximity to national marine sanctuaries. Many of these people are connected to the sanctuaries through commercial and recreational activities such as surfing, boating, and diving.

Records indicate that 787 vessel and aircraft losses were documented between 1595 and 2013 along California’s north-central coast from Cambria north to Manchester, including the Farallon Islands. To date, 392 in GFNMS, 395 in MBNMS, and none in CBNMS have been documented. Some sites have been located and inventoried by NOAA and the NPS. Although some vessels were later salvaged or refloated, some artifacts associated with wrecking events may still exist. GFNMS and MBNMS have also collaborated with state and federal agencies, and the private sector to gather resource documentation and to create opportunities to locate and

record submerged archaeological resources. GFNMS and MBNMS maintains shipwreck inventories, created from established shipwreck databases, ongoing historical research and field surveys. GFNMS and MBNMS are also faced with the challenge of identifying and monitoring historic and non-historic shipwrecks posing environmental threats to sanctuary marine resources. Lurking in the deep are the hazardous cargoes, abandoned fuel, and unexploded ordnance inside sunken vessels that are slowly deteriorating in a corrosive marine environment.

Submerged Site Inventory and Assessment Initiative

ONMS regulations mandate that archaeological resources are managed consistently with the Federal Archaeological Program. The ONMS's MHP was established to emphasize the need for research, education, outreach, and protection of maritime heritage resources. Issues to be addressed regarding inventorying, assessing, and protecting submerged archaeological are below.

Shipwrecks as Environmental Threats

GFNMS and MBNMS both coordinate with the Damage Assessment Restoration Fund and other relevant agencies. GFNMS and MBNMS will work with CINMS to expand their efforts to identify shipwrecks that may pose environmental threats and will provide pertinent information to NOAA's Hazardous Materials (HAZMAT) division and the NMSP for development of the Southwest Environmental Response Application (ERMA) and the Resources and Under Sea Threats (RUST) Geographic Information Systems (GIS) database systems.

Site Protection

As submerged shipwreck sites are inventoried in the sanctuaries and become more visible to the public, they are also more at risk from divers wishing to remove artifacts. GFNMS, and MBNMS will consider enhancing visitor usage while mitigating damage to heritage resources by providing the sport and commercial diving communities and visitors to shoreline sites with interpretive information about archaeological sites and their protection. Sanctuary and California state regulations prohibit the un-permitted disturbance of submerged archaeological and historical resources. The ONMS and California State Lands Commission (CSLC) have an archaeological resource recovery permit system in place. Protection and monitoring of these sites will become a more pronounced responsibility in the sanctuaries' heritage resources management program. Partnerships will be established with local law enforcement agencies for site monitoring and compliance of public access to submerged sites.

Traditional User and Ocean-Dependent Groups

There is the potential to cultivate partnerships with local, state, and federal programs (e.g., American Folk Life Center, universities, Department of the Interior) and the identified communities. These partnerships could aid in the design and implementation of studies of living maritime heritage and folk life to help educate the public about traditional cultures and practices including Native Americans, other ethnic residents, fishermen and economic activities reflecting historic human interaction with the ocean.

Education and Outreach

GFNMS, and MBNMS have partnered with CINMS and OCNMS in the development of the West Coast Shipwreck Database online curriculum. The database serves to inform the public about the historical significance of shipwrecks, including those posing environmental threats to sanctuary marine resources, e.g., the *Jacob Luckenbach* story. The database is being expanded to include living journals assisting families searching for information about shipwrecked vessels their relatives may once have served on as crewmembers or passengers. Family members are encouraged to share with the public their living journals associated with the shipwreck histories for dissemination. CBNMS, GFNMS, and MBNMS will identify partners to explore exhibit development at maritime or regional museums and learning centers that focus on the areas' maritime heritage history; shipwrecks, exploration, fishing, and fisheries; vessel trades, routes and nationalities; and shoreline structures such as lighthouses, lifesaving stations, canneries, dog-hole ports, whaling facilities, surfing, and boating.

STRATEGY XMHR-1: *Continue to build the Maritime Heritage Program.*

The ONMS is placing increasing emphasis on the development of maritime heritage resources programs to identify and protect submerged archaeological sites, and to increase public awareness about the maritime history associated with individual sanctuaries. A well-coordinated program will be required to identify and assess documented shipwrecks, some of which may pose significant environmental hazards; to protect sites from unauthorized disturbance; and to develop heritage partnerships and education programs.

Activity 1.1 Continue to identify potential maritime heritage partners and sources of funding.

Regional MHP staff should look for partners and funding opportunities to expand program into the expansion area.

STRATEGY XMHR-2: *Inventory and assess submerged sites.*

CBNMS, GFNMS, and MBNMS, in conjunction with the West Coast Regional Maritime Heritage Coordinator, will collaborate with state and federal agencies and the private sector to gather resource documentation and to create opportunities to locate and record submerged archaeological resources.

Activity 2.1 Inventory shipwrecks across the region.

Continue to establish external partnerships to inventory potential shipwreck sites with other federal, state, and local agencies as well as avocational archaeologists, commercial divers and fishermen, and recreational divers.

Activity 2.2 Conduct systematic research and surveys of archaeological sites, including the remains of prehistoric, as well as historic sites, representing ship and aircraft losses.

This effort would be focused on geographic regions with a high probability of cultural and historic remains established by conducting remote sensing surveys and/or diver investigations of target sites as part of larger research expeditions across the three sanctuaries. Such surveys would include the development of a research plan, education materials and curriculum, a project website, a site assessment report that include a comparison with previous surveys.

Activity 2.3 Establish a shipwreck reconnaissance and site monitoring program.

Use a model similar to that used at CINMS to record and monitor submerged sites and to document new artifact discoveries and evaluation of human site disturbance. Record site positions in NOAA's National Marine Sanctuary Archeological Site (ARCH) GIS database.

Activity 2.4 Assess and nominate appropriate submerged archaeological sites for inclusion in the National Register of Historic Places.

Regional MHP staff should look to contribute appropriate sites across the sanctuaries.

STRATEGY XMHR-3: *Assess shipwrecks and submerged structures for hazards.*

GFNMS and MBNMS, and possibly CBNMS, are faced with the challenge of identifying and monitoring historic and non-historic shipwrecks that may pose environmental threats to sanctuary marine resources. Information pertaining to shipwrecks as environmental threats is provided to NOAA's Emergency Response Division and the ONMS for the development of the ERMA and Remediation of Underwater Legacy Environmental Threats (RULET) database systems. The sanctuaries will develop a plan to address this issue since there are many shipwrecks that pose threats in the near future.

Activity 3.1 As needed, add to the inventory of shipwrecks, inside and outside of sanctuary boundaries, posing environmental threats to sanctuary marine resources.

This inventory is based upon primary and secondary source documentation from established shipwreck databases, interviews with commercial divers and fishermen, and recreational divers who frequently visit submerged shipwrecks. The sanctuaries will also collaborate with other organizations doing similar research. As the sanctuaries compile information regarding sites that may pose environmental threats, this information will be coordinated with NOAA's Emergency Response Division and the ONMS for the development of the ERMA and RULET database systems.

Activity 3.2 Monitor shipwreck sites.

Direct efforts to monitor sites that have been located and are considered a threat to sanctuary marine resources. Use protocols for site evaluation based on the monitoring work at such sites as the *Jacob Luckenbach* and the *Montebello*.

Activity 3.3 Coordinate with partners to reduce threats from shipwrecks.

Maritime Heritage Cross-Cutting Action Plan
GFNMS Draft Management Plan

GFNMS and MBNMS will continue to work with ONMS to identify shipwrecks that may pose environmental threats and will provide pertinent information to NOAA's Emergency Response Division and the ONMS for the inclusion in the ERMA and RULET GIS database systems. ONMS will work with other trustee agencies to develop a plan to monitor and prevent, reduce, and respond to environmental threats from any such vessels.

Activity 3.4 For historic shipwrecks, ensure compliance under Section 106 of the NHPA and the NMSA.

STRATEGY XMHR-4: *Protect and manage submerged archaeological resources.*

As part of the NEPA compliance process CBNMS, GFNMS and MBNMS are required to submit a review under Section 106 of the National Historic Preservation Act (NHPA) identifying historic and pre-historic archaeological properties and to take into account activities that may have an adverse or no adverse effect to these properties. Issues to be addressed by GFNMS, MBNMS, and possibly CBNMS, regarding the protection of submerged archaeological resources include:

- Permitting
- Site protection through enforcement and education
- Shipwrecks as environmental threats

Activity 4.1 Coordinate stewardship of submerged resources.

Jointly develop a uniform protocol to manage, monitor, and protect submerged sites within the three sanctuaries in partnership with appropriate local law enforcement agencies.

Activity 4.2 Provide training to sanctuary staff and facilitate training for partners.

The training will focus on the importance of submerged archaeological resources and the need and tools to manage and protect them and Section 106 requirements.

Activity 4.3 Identify archaeological and historic resources currently outside sanctuary boundaries that may be of significant historic interest or may pose a threat to sanctuary resources.

STRATEGY XMHR-5: *Conduct public outreach with traditional user and ocean-dependent groups and communities.*

A key aspect of the CBNMS, GFNMS, and MBNMS maritime heritage program will be to educate the public about traditional maritime cultures and practices including Native Americans; exploration; settlement; ethnic groups; whalers; dog-hole ports, historic and present-day fishermen; recreational uses; and traditional shipping, shipbuilding, canneries, and other economic activities reflecting historic human interaction with the ocean. Although sanctuary's maritime heritage protection status is given only to cultural and historical resources, the program recognizes that traditional user and ocean-dependent groups are interconnected with the

sanctuaries and are an integral part of their history and cultural maritime landscape of the region. Therefore, this program will also acknowledge those traditional maritime heritage activities and practices consistent with the NMSA's primary goal of resource protection.

Activity 5.1 Identify traditional user and ocean-dependent groups.

Solicit and document the range of traditional user and ocean-dependent groups' ideas, values, etc. Conduct a literature search to gather resource documentation on traditional users and ocean-dependent groups and communities. Use this information to prioritize appropriate aspects of their maritime heritage.

Activity 5.2 Develop collaborative programs and initiatives.

GFNMS will initiate a partnership with the fishing community at Pillar Point Harbor to enhance relationships and jointly develop ways to educate the public on the interconnections with the three sanctuaries.

Activity 5.3 Create an inventory of historic and present maritime heritage communities.

Focus on traditionally associated people to support mapping, traditional place names, and interpretive programs. Assess and nominate appropriate sites for the National Register of Historic Places.

Activity 5.4 Map and document traditional communities and sites.

These communities and sites may include fishing and whaling sites; place names; shipping/commercial marine transport of passengers and cargo; lighthouses and life-saving stations; dog-hole ports; fort, tribes (coastal); and recreational uses such as surfing and diving.

STRATEGY XMHR-6: *Continue to provide maritime heritage-focused education and outreach programs.*

CBNMS, GFNMS and MBNMS's maritime cultural landscape of provides a unifying theme to educate and inform people along the California coast and throughout the country about the human interaction with the ocean. This involves understanding the broader context of specific places that encompasses human activities that includes indigenous people of our nation's pre-historic and historic past as well as today's modern cultures and their sacred places; geography; paleontology; archaeology; traditional knowledge and sociocultural studies; oral traditions; commercial and recreational fisheries; recreation activities, maritime heritage resources such as lighthouses, piers, wharves, lifesaving stations, abandoned dog-hole ports and landings and working waterfronts, revealing the many human communities that overlap with marine environments in our national marine sanctuaries and contiguous waters. Through websites, museum exhibits, and other tools, the sanctuaries will continue to provide information on:

- Programs by and about traditional cultures and practices including Native Americans, ethnic groups, fishermen, and economic activities

Maritime Heritage Cross-Cutting Action Plan
GFNMS Draft Management Plan

- Shipwrecks, exploration, fishing and fisheries; trade vessels, routes and nationalities
- Shoreline structures such as lighthouses, life-saving stations, fort, canneries, dog-hole ports, and whaling facilities
- Traditional recreational activities such as diving, surfing, and boating
- Stewardship of our cultural and historic maritime resources

Activity 6.1 Improve information sharing and dialogue.

Hold an annual maritime heritage event to highlight specific cultural and historic resources that the sites are mandated to protect, such as archeological sites, shipwrecks, etc., and link to adjacent communities and human uses.

Activity 6.2 Create, expand and populate individual sanctuary websites and/or the West Coast Shipwreck Database.

The websites should include specific information about maritime heritage resources, such as living journals of traditional users and ocean-dependent groups as well as shipwreck survivors, archaeological project updates, potential environmental threats, and maps.

Activity 6.3 Develop and implement education and outreach programs and materials for the MHP.

Incorporate traditional users/ocean-dependent groups and submerged archaeological resources into existing and new education/outreach programs.

Activity 6.4 Collaborate on maritime heritage resource exhibits and signage.

The three sites will incorporate maritime heritage themes and messages as part of the California Statewide Signage, Exhibits, and Facilities plan.

TABLE XMHR-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING MARITIME HERITAGE RESOURCES ACTION PLAN

Desired Outcome(s) For This Action Plan:	
Establish a well-coordinated joint maritime heritage program that identifies and assesses documented shipwrecks and associated environmental hazards; protects sites from unauthorized disturbance; and develops heritage partnerships and education programs.	
Performance Measures	Explanation
By Year 5, the Maritime Heritage program will identify and characterize all historical and cultural resources in these three sanctuaries in a Web database and, when appropriate, develop plans to protect these resources from threats. In the case of ships that pose a threat from oil spills, plans will be developed to mitigate harmful effects on natural resources.	The specific maritime heritage activities identified in this plan build upon existing site efforts and collectively establish a new joint maritime heritage program for this region. The program will allow these sites to be responsive to the NMSA mandate to identify and protect cultural and historic resources. Implementation of these strategies will better streamline and coordinate overall NMSP efforts to protect maritime heritage resources and expand awareness of the importance of these resources to the public.

KEY PARTNERS

CBNMS, GFNMS, MBNMS, CINMS, MAC, NOAA Emergency Response Division , NOAA Office of Response and Restoration, NOAA OLE, NPS, SHPO, California Sea Grant, CSLC, San Mateo County Harbor District – Pillar Point, and Half Moon Bay Fishermen’s Association, FMSA.



APPENDICES

GFNMS DRAFT MANAGEMENT PLAN

- A. Jurisdictional Authorities**
- B. Glossary of Terms**
- C. Acronyms**
- D. Citations**
- E. Vertebrates**
- F. Invertebrates and Algae**
- G. Introduced Species**

Appendix A: Jurisdictional Authorities

The sanctuary overlaps and borders the jurisdictions of several other agencies. Coordination and cooperation among the responsible agencies are critical to the success of the sanctuary. These agencies and their roles in assisting management of the sanctuary are described below.

FEDERAL AUTHORITIES

National Marine Sanctuaries

Two other national marine sanctuaries share boundaries with Gulf of the Farallones National Marine Sanctuary (GFNMS). To the north and west is Cordell Bank National Marine Sanctuary (CBNMS); to the south and east is Monterey Bay National Marine Sanctuary (MBNMS). GFNMS works closely with both CBNMS and MBNMS to protect shared populations and habitats.

The GFNMS is responsible for managing programs and regulations of the Northern Management Area of MBNMS, which includes all MBNMS waters and submerged lands north of Point Año Nuevo and the San Mateo/ Santa Cruz county line.

National Park Service

The sanctuary manages waters adjacent to two agencies of the National Park Service (NPS), the Golden Gate National Recreation Area (GGNRA) and Point Reyes National Seashore (PRNS). They work closely with the sanctuary on the protection and management of natural and cultural marine resources. GGNRA includes an extensive network of recreational and historic sites. The sanctuary coordinates and cooperates with PRNS and GGNRA in the areas of interpretation, administrative support, wildlife protection, oil spill preparedness, and natural resource damage assessment and restoration. PRNS represents the largest stretch of shoreline adjacent to the sanctuary. It includes certain state tide and submerged lands that have been conveyed to the national seashore. The seashore's management plan defines Natural Zones that are to remain unaltered by human activity.

United States Fish and Wildlife Service (FWS)

Within the waters of GFNMS, the FWS is responsible for protecting all marine mammal species, including sea otters; other than cetaceans and pinnipeds under the Marine Mammal Protection Act (MMPA); and Brown Pelican, Short-Tailed Albatross and other bird species listed as threatened or endangered under the Endangered Species Act (ESA). The National Marine Fisheries Services (NMFS) is responsible for protecting cetaceans and pinnipeds under the MMPA, and sea turtles and fish that are listed as threatened or endangered under the ESA.

The FWS also has responsibility for managing the Farallon National Wildlife Refuge. The refuge includes North, Middle, and Southeast Farallon Islands; Maintop Island; and Noonday Rock. The refuge is operated primarily as a migratory bird refuge to protect murrelets, auklets,

Appendix A: Jurisdictional Authorities
GFNMS Draft Management Plan

guillemots, puffins, and other birds, and secondarily, to protect seal, sea lion, and other marine mammal assemblages.

National Marine Fisheries Service (NMFS)

The NMFS is responsible for enforcing the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the MMPA, and the ESA. Pursuant to the MSFCMA NMFS approves, implements and enforces fishery management plans (FMP) prepared by regional fishery management councils. NMFS works closely with the California Department of Fish and Wildlife (CDFW) and United States Coast Guard (USCG) for enforcement operations both within and outside the three-mile territorial sea. Gulf of the Farallones fish populations affected by FMP regulations include lingcod, rockfish, and salmon.

The NMFS shares responsibility with the FWS for implementation of the MMPA and the ESA (see FWS entry above).

United States Coast Guard (USCG)

The USCG is the federal government's primary maritime law enforcement agency. The USCG's missions include maritime law enforcement, national security, maritime safety, and marine environmental protection. For ocean and coastal activities, the USCG manages maritime transportation activities in order to minimize loss of life and damage to the environment. The USCG has historically held the primary responsibility for ensuring cleanup of any oil spill or other pollutants in the marine environment. To avert oil spills and promote safety, the USCG inspects vessels carrying oil and other hazardous materials. The USCG requires vessels to have approved response plans detailing owner and operator response to an oil spill and ensuring proper response activities. Pursuant to the Oil Spill Prevention Act of 1990 (OPA), which defines ground rules for dealing with oil pollution events and recommends pollution prevention measures, the USCG has responsibility for preparing most of the regulations necessary to implement OPA. Additionally, the USCG must be consulted in the development of oil spill contingency plans for marine oil and gas facilities and terminals. The OPA also allows for natural resource damage recovery by federal and state resource trustees.

Bureau of Ocean Energy Management (BOEM)The Bureau of Ocean Energy Management (BOEM) is responsible for managing development of the nation's offshore resources in an environmentally and economically responsible way. Functions include: Leasing, Plan Administration, Environmental Studies, National Environmental Policy Act (NEPA) Analysis, Resource Evaluation, Economic Analysis and the Renewable Energy Program.

Bureau of Safety and Environmental Enforcement (BSEE)

BSEE was created to enforce safety and environmental regulations. Functions include: All field operations including Permitting and Research, Inspections, Offshore Regulatory Programs, Oil Spill Response, and newly formed Training and Environmental Compliance functions.

Environmental Protection Agency (EPA)

The Environmental Protection Agency (EPA) has regulatory responsibilities with regard to ocean water quality. Under the U. S. Clean Water Act (CWA), EPA establishes and enforces water quality standards for waters outside of the three-mile state waters. Title 1 of the Marine Protection, Research, and Sanctuaries Act (Ocean Dumping Act), prohibits the unpermitted dumping of “any material transported from a location outside the United States” into the territorial sea of the United States, or into the zone contiguous to the territorial sea, to the extent discharge into the contiguous zone would affect the territorial sea or the territory of the United States. The act is administered by the EPA and supersedes any CWA requirements.

STATE AUTHORITIES

California Department of Fish and Wildlife (CDFW)

The CDFW, under the Fish and Game Code (and Chapter 14 of the Administrative Code), regulates and manages a wide variety of activities affecting the living marine resources found in the territorial sea and in the 200-mile-wide exclusive economic zone (EEZ). In cooperation with NMFS, the CDFW enforces federal regulations established under the MSFCMA. It also enforces and implements the Marine Life Management Act and the Marine Life Protection Act (MLPA). The CDFW has established ecological reserves, marine reserves, game refuges, and marine life refuges in the ocean waters and submerged lands surrounding the Farallon Islands and Point Reyes. The agency has the authority to prohibit or restrict activities that may harm resources, including fishing, collecting, swimming, boating, and public entry. The CDFW works closely with the sanctuary in oil spill response, damage assessment, and restoration through its Office of Spill Prevention and Response (OSPR).

Several fisheries conducted within the GFNMS are managed by the state of California. The CDFW is responsible for preparing FMPs under the authority of the California Fish and Game Commission and the California State Legislature. Gulf of the Farallones fish populations affected by California regulations include Pacific herring, nearshore finfish, Market squid, and Dungeness crab.

State Water Resources Control Board (SWRCB)

The SWRCB is responsible for water quality within state waters. The SWRCB adopts statewide water quality control plans and policies, such as the Ocean Plan, the Thermal Plan, and the State Implementation Policy. The Regional Water Control Boards adopt and submit basin plans to the state board for approval. Title III, Section 303 of the CWA requires California to submit statewide and basin plans to the EPA for approval.

The SWRCB has established a system of thirty-four Areas of Special Biological Significance (ASBS), now known as State Water Quality Protection Areas (SWQPA). These are areas designated for special protection from undesirable alteration in natural water quality. Five ASBSs (SWQPAs) are located in GFNMS. These are at Duxbury Reef, Point Reyes Headland, Double Point, Bird Rock, and the Farallon Islands.

California Coastal Commission (CCC)

Appendix A: Jurisdictional Authorities
GFNMS Draft Management Plan

The CCC was established under the California Coastal Zone Management Act (CZMA) of 1972, which gives authority to the commission to establish policy for activities in state waters. The CZMA established the authority for a federal-state partnership to manage development and use of the coastal zone. The CCC also has the authority to review federal activities in the coastal zone to ensure consistency with California's Coastal Zone Management Program.

California State Lands Commission (SLC)

SLC has jurisdiction over all of California's tide and submerged lands and over the beds of naturally navigable rivers and lakes, each of which are sovereign lands, swamp, and overflow lands, and school lands (proprietary lands). Management responsibilities of the SLC extend to activities within submerged land and those within three nautical miles of shore.

California Department of Boating and Waterways (DBW)

The DBW programs are designed to fulfill the needs of California's boating community including funding for local waterway law enforcement programs, assisting in beach erosion control projects, licensing yacht and ship brokers, and funding the development of public access boating facility projects. The DBW also provides grants to cities, counties, and districts for developing small craft harbors/marinas; and loans to private recreational marinas.

Appendix B: Glossary of Terms

Action plan: A major section of a management plan containing related strategies and activities designed to address a specific issue or function (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Activity: Specific actions that will be taken to carry out a strategy (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Aquaculture: The cultivation of marine life for harvest and utilization by humans.

Bathymetry: Water depth measurement information used to produce depth-contoured charts.

Benthic: The region of the ocean consisting of the sea bed and the organisms that live on or in it.

Benthic communities: Bottom-dwelling plants and animals.

Biodiversity: The variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

Chum: Bait usually consisting of oily fish ground up and scattered on the water.

Continental shelf: A generally shallow, flat submerged portion of a continent, extending to the point of step descent to the ocean floor.

Critical habitat: The specific areas within the geographical area occupied by a threatened or endangered species on which are found those physical or biological features essential to the conservation of the species, and which may require special management considerations or protection.

Demersal: Fishes and other aquatic organisms that live near the bottom of the water column.

Depleted: A species is termed depleted when it falls below its optimum sustainable population.

Designation document: A portion of the regulations for a given sanctuary that spells out the terms of its designation, including boundaries, regulations, and those activities potentially subject to future regulation.

Desired outcome: A succinct and concise statement that articulates a desired future for a sanctuary relative to a specific problem statement (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Ecology: The science of the relationships between organisms and their environments.

Ecosystem: The sum total of all living and nonliving components of a particular area that interact and exchange materials with each other; sometimes defined as the ecological community of organisms plus the environment with which they interact. Energy flow and nutrient cycling are regulated within a particular ecosystem and are studied as indicators of its overall health.

Effluent: An outflow of waste, as from a sewer.

Endangered species: Any species that is in danger of extinction throughout all or a significant portion of its range.

Epifauna: Animals that live on the ocean bottom, either attached or moving freely over it.

Food chain: A succession of organisms in a community that constitutes a feeding chain in which food energy is transferred from one organism to another as each consumes a lower member and in turn is preyed upon by a higher member.

Indigenous: Living or occurring naturally in a specific area or environment.

Infaunal: Organisms that live buried in sediments, including a variety of polychaetes, burrowing crustaceans, and mollusks.

Infrastructure: Basic installations and facilities, such as roads, power plants, transportation, and communication systems.

Invertebrate: An animal lacking a backbone or spinal column.

Isobath: An imaginary line or one drawn on a map connecting all points of equal depth below the surface of a body of water.

Marine protected area: Any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein. (Executive Order 13158 on Marine Protected Areas). Under this broad definition, a wide variety of sites including fishery management zones, national parks, national marine sanctuaries, national estuarine research reserves, state conservation areas, critical habitats, and state reserves could be considered as marine protected areas.

Marine reserve: A kind of marine protected area generally agreed to have strict regulations regarding the extraction of resources.

Marine sanitation device: Any equipment for installation on board a vessel which is designed to receive, retain, treat, or discharge sewage, and any process to treat such sewage.

Mollusks: Any of various members of the phylum Mollusca, largely marine invertebrates, including the edible shellfish and some 100,000 other species.

Multibeam: A type of sonar that has multiple beams to record water depth.

Nonpoint source pollutant discharges: Those pollutant discharges not associated with a specific location (e.g., urban and agricultural pesticide runoff).

Organism: Plant or animal.

Overfished: An overfished stock or stock complex is one whose size is sufficiently depleted that a change in management practices is required in order to achieve an appropriate level and rate of rebuilding. A rebuilding plan is required for stocks that are overfished.

Pathogens: Any agent, most commonly a micro-organism, capable of causing a disease.

Pelagic: Of, relating to, or living in open seas or oceans rather than waters adjacent to land or inland waters.

Planktonic: Organisms dependent on water movement and currents as their means of transportation, including phytoplankton, zooplankton, and ichthyoplankton.

Point source pollutant discharges: The discharge of pollutants from a distinct and identifiable source, such as a sewer or industrial outfall pipe.

Program/Issue Statements: A one or two sentence articulation of the specific components of an issue (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Salinity: The relative concentration of salts, usually sodium chloride, in a given water sample. It is usually expressed in terms of the number of parts per thousand (ppt) or parts per million (ppm) of chlorine (Cl). As a reference, the salinity of seawater is approximately 35 ppt.

Side-scan sonar: A type of sonar that gathers sound reflections at oblique angles to the sensor.

Socioeconomic: Being both social and economic.

Strategy: The means by which a particular desired outcome can be achieved (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Substrate: A surface on which a plant or animal grows or is attached.

Threatened species: Plant or animal species believed likely to move into the endangered category in the foreseeable future.

Trawling: To fish using a trawl, a large tapered and flattened or conical net towed along the sea bottom.

Trolling: To fish by running a baited line behind a slowly moving boat.

Trophic: A description related to feeding; it often refers to a feeding level in a food chain.

Appendix B: Glossary of Terms
GFNMS Draft Management Plan

Trophic level: One of a succession of steps in the movement of energy and matter through a food chain in an ecosystem.

Turbidity: The extent to which there are suspended or stirred up particles or sediments, as in the water column.

Zone: An area or region considered as separate and distinct from others because of its designated use, plant or animal life, etc.

Zoning: The act of partitioning areas of land or water into sections dedicated to specific purposes and activities.

Appendix C: Acronyms

ACP	Area Contingency Plan (USCG)
ACR	Audubon Canyon Ranch
ACS	American Cetacean Society
AIS	Automated Identification System
AOP	Annual Operating Plan
APPS	U.S. Act to Prevent Pollution from Ships
ASBS	Area of Special Biological Significance
ATOC	Acoustic Thermometry of Ocean Climate
BASA	Bay Area Science Alliance
BLM	Bureau of Land Management
BML	Bodega Marine Laboratory
BMP	best management practices
BOEM	Bureau of Ocean Energy Management
Cal EPA	California Environmental Protection Agency
CalCOFI	California Cooperative Oceanic Fisheries Investigations
CalTrans	California Department of Transportation
CAP	Civil Aeronautical Patrol
CAS	California Academy of Sciences
CBNMS	Cordell Bank National Marine Sanctuary
CBSOA	California Boating Safety Officers Association
CCA	California Critical Coastal Areas
CCC	California Coastal Commission
CCR	California Code of Regulations
CCRWQBC	Central Coast Regional Water Quality Control Board
CDBW	California Department of Boating and Waterways
CDF	California Department of Forestry
CDFW	California Department of Fish and Wildlife
CDPR	California Department of Parks and Recreation
CenCOOS	Central California Ocean Observing Systems
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CIMT	Center for Integrated Marine Technology
CINMS	Channel Islands National Marine Sanctuary
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMAR	Coastal Maritime Archaeology Resources
COASST	Coastal Observation and Seabird Survey Team
CODAR	Coastal Ocean Dynamics Applications Radar
COE	U.S. Army Corps of Engineers
CSC	California Species of Special Concern
CSC	Coastal Services Center
CSLC	California State Lands Commission
CSUMB	California State University Monterey Bay
CWA	U.S. Clean Water Act
CZARA	Coastal Zone Authorization Amendments
CZMA	Coastal Zone Management Act

Appendix C: Acronyms
GFNMS Draft Management Plan

DARRF	Damage Assessment and Restoration Evolving Fund
DBW	California Department of Boating and Waterways
DDT	dichlorodiphenyltrichloroethane
DEIS	Draft Environmental Impact Statement
DMP	Draft Management Plan
DOC	United States Department of Commerce
DOI	United States Department of the Interior
DPR	California Department of Parks and Recreation
EDS	Ecosystem Dynamics Study
EECOM	Environmental Education Council of Marin
EEZ	U.S. Exclusive Economic Zone
EFH	essential fish habitat
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ERMA	Southwest Environmental Response Management Application
ESA	Endangered Species Act
ESNERR	Elkhorn Slough National Estuarine Research Reserve
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FEIS/MP	Final Environmental Impact Statement / Management Plan
FES	Friends of the Elephant Seal
FGC	Fish and Game Commission
FGDC	Federal Geospatial Data Center
FIRWD	Farallon Islands Radioactive Waste Dumpsite
FKNMS	Florida Keys National Marine Sanctuary
FMP	Fishery Management Plan
FMR	Fitzgerald Marine Reserve
FMSA	Farallones Marine Sanctuary Association
FSO	Friends of the Sea Otter
FWPCA	Federal Water Pollution Control Act
GCEL	General Council Enforcement Litigation
GCOS	General Council Ocean Service
GFNMS	Gulf of the Farallones National Marine Sanctuary
GGNRA	Golden Gate National Recreation Area
GIS	geographic information systems
GPS	global positioning system
GRNMS	Grey's Reef National Marine Sanctuary
GSA	General Services Administration
HAB	harmful algal bloom
HAZMAT	Hazardous Materials Response Division
HDD	horizontal directional drilling
HIHWNMS	Hawaiian Islands Humpback Whale National Marine Sanctuary
IACC	Interagency Coordinating Committee
ICES	International Council for Exploration of the Sea
ICS	Incident Command System
IFQ	individual fishing quota
IGERT	Integrative Graduate Education and Research Traineeship Program
IMO	International Maritime Organization

Appendix C: Acronyms
GFNMS Draft Management Plan

IPPC	International Plant Protection Convention
ITQ	individual transferable quota
IUCN	International Union for Conservation of Nature and Natural Resources
JMPR	Joint Management Plan Review
LCP	Local Coastal Program
LCV	Large Commercial Vessels
LiMPETS	Long-term Monitoring Program and Experiential Training for Students
MAC	Maritime Archaeology Center (NOAA)
MALT	Marin Agricultural Land Trust
MARE	Marine Activities, Resources, and Education
MARPOL	International Convention for the Prevention of Pollution from Ships
MATE	Marine Advanced Technology Education (Center)
MBA	Monterey Bay Aquarium
MBARI	Monterey Bay Aquarium Research Institute
MBNMS	Monterey Bay National Marine Sanctuary
MBTA	Migratory Bird Treaty Act
MCBI	Marine Conservation Biology Institute
MCSTOPPP	Marin County Stormwater Pollution Prevention Program
MERITO	Multicultural Education for Resource Issues Threatening Oceans
MGD	million gallons per day
MHW	mean high water
MHWL	mean high water line
MLMA	Marine Life Management Act
MLML	Moss Landing Marine Laboratories
MLPA	Marine Life Protection Act
MMPA	Marine Mammal Protection Act
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPA	marine protected area
MRDC	Marin Rural Development Council
MSD	marine sanitation device
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
NANPCA	Nonindigenous Aquatic Nuisance Prevention and Control Act
NAS	Nautical Archaeology Society
NASA	National Aeronautics and Space Administration
NCCOS	National Centers for Coastal Ocean Science
NEBA	Net Environmental Benefits Analysis
NEMO	Nonpoint Education for Municipal Officials
NEPA	National Environmental Policy Act
NGO	non-governmental organization
NHPA	National Historic Preservation Act
NISA	National Invasive Species Act of 1996
NISAC	Non-native Invasive Species Advisory Committee
NM	nautical mile
NMFS	National Marine Fisheries Service
NMSA	National Marine Sanctuaries Act
NMSF	National Marine Sanctuaries Foundation
NMSS	National Marine Sanctuary System

Appendix C: Acronyms
GFNMS Draft Management Plan

NOAA OLE	NOAA Office of Law Enforcement
NOAA	National Oceanic and Atmospheric Administration
NODC	National Oceanographic Data Center
NOS	National Ocean Service
NPDES	National Pollutant Discharge Elimination System
NPR	National Public Radio
NPS	National Park Service
NPS	Naval Postgraduate School
NPS	non-point source pollution
NRDA	National Resource Damage Assessment and Restoration
NURP	National Undersea Research Program (NOAA)
OCNMS	Olympic Coast National Marine Sanctuary
OCRM	Office of Coastal Resource Management (NOAA)
OCS	outer continental shelf
OE	Office of Enforcement
OES	Office of Emergency Services
ONMS	Office of National Marine Sanctuaries
OPA	Oil Spill Prevention Act of 1990
ORR	Office of Response and Restoration
OSPR	(Office of) Oil Spill Prevention and Response (CDFW)
OSRO	Oil Spill Response Organization
OWE	Open Water Exchange
PARS	Port Access Route Studies
PCB	polychlorinated biphenyl
PCFFA	Pacific Coast Federation of Fishermen's Associations
PCLC	Pacific Coast Learning Center
PFMC	Pacific Fishery Management Council
PISCO	Partnership for Interdisciplinary Studies of Coastal Oceans
PRBO	Point Blue Conservation Science, (formerly PRBO Conservation Science and Point Reyes Bird Observatory)
PRNS	Point Reyes National Seashore
PRNSA	Point Reyes National Seashore Association
PSA	public service announcement
PSMFC	Pacific States Marine Fisheries Commission
PWSA	Ports and Waterways Safety Act
RBOC	Recreational Boaters of California
RCRA	U.S. Resource Conservation and Recovery Act
ROV	remotely operated vehicle
RRP	Regional Response Plan
RUST	Resources and Under Sea Threats (ONMS database system)
RWQCB	Regional Water Quality Control Board
SAC	Sanctuary Advisory Council
SBNMS	Stellwagen Bank National Marine Sanctuary
SCCAT	Southern California Caulerpa Action Team
SCRP	Submerged Cultural Resources Program (ONMS)
SEALS	Sanctuary Education Awareness and Long-term Stewardship
SeaWif	Sea-viewing Wide Field of Vision
SERC	Smithsonian Environmental Research Center
SFBNERR	San Francisco Bay National Estuarine Research Reserve

SFSU	San Francisco State University
SFU	San Francisco State University
SHPO	California State Historic Preservation Office
SIMoN	Sanctuary Integrated Monitoring Network (MBNMS)
SLC	California State Lands Commission
SMCNHA	San Mateo Coast Natural History Association
SPO	Special Projects Office
SST	sea surface temperature
STRAW	Students and Teachers Restoring a Watershed
SWiM	System Wide Monitoring Program (ONMS)
SWMEA	Southwest Marine and Aquatic Educator's Association
SWQB	State Water Quality Board
SWQPA	State Water Quality Protection Area
SWRCB	State Water Resources Control Board
TBNMS	Thunder Bay National Marine Sanctuary
TMDL	total maximum daily loads
TMMC	The Marine Mammal Center
UCCE	University of California Cooperative Extension
UCD	University of California Davis
UCSC	University of California Santa Cruz
UNESCO	United Nations Educational Scientific and Cultural Organization
USACE	U.S. Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VTs	Vessel Traffic System
VTSS	Vessel Traffic Separation Schemes
WDR	Waste Discharge Requirement
WRP	Western Regional Panel on Aquatic Nuisance Species

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Appendix E: Vertebrates

GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY

VERTEBRATES

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The following lists of vertebrate species are known to occur in the Gulf of the Farallones National Marine Sanctuary (GFNMS). These lists include 36 mammals, 174 birds, 4 reptile, and 390 fish species that have been recorded alive or dead or, for some species of fish, are suspected of occurring within the boundary of the GFNMS, including the waters of Tomales Bay, Drakes and Limantour Esteros, and Bolinas Lagoon. In addition to common and scientific names of each specific taxon, the lists include information or data on Federal listed status and the importance of the sanctuary to the species, as listed under "Habitat Importance." This designation is based on 1) the abundance of the species within the sanctuary, 2) the proportion of the overall range or population that occurs in the sanctuary, and 3) the importance of the sanctuary to breeding individuals. Also noted by asterisk for bird and mammal species, is if the sanctuary is used by that species for foraging, roosting, nesting, and/or rearing of young during its breeding season.

Taxonomic classification, phylogenetic order, and all other information are according to references used for each class of vertebrates, listed below. Each class has slightly differing

criteria for acceptance to the list. For mammals the list includes all marine species, including vagrants, which have been recorded within sanctuary waters, either observed alive or dead. Only one fresh-water/estuarine species, river otter, is included based on occurrence in coastal bodies of water and because the GFNMS boundary includes estuarine habitats where these otters have been documented. For birds the list includes all marine species, including vagrants, that have been recorded in sanctuary waters and those species that are regularly found in the coastal esteros and lagoons. For a full list of over 400 bird species, including vagrant estuarine species and landbirds recorded on Southeast Farallon Island, see Pyle 2000. For reptiles and fish the lists include those species recorded in the sanctuary plus others suspected of occurring based on records both north and south of the sanctuary, but for which no definite records are currently known.

The headings of the vertebrate lists include the following categories:

COMMON NAME - The common (English) name of the species.

SCIENTIFIC NAME - The scientific (Latin) name of the species.

FEDERAL STATUS - The federal listed status as of May 2013 (as found at URL: <http://ecos.fws.gov/ecos/indexPublic.do>). These designations are given if any population or subspecies occurring in the sanctuary is so listed.

E - Endangered

T - Threatened

D – Delisted since designation of the sanctuary

HABITAT IMPORTANCE - The "Habitat Importance" of the sanctuary to the species. Codes are as follows:

E - Extremely Important

V - Very Important

S - Somewhat Important

No designation indicates the sanctuary is of little importance or importance is unknown.

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Appendix E: Vertebrates
GFNMS Draft Management Plan

Reptiles

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VERTEBRATES

Birds

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	HABITAT IMPORTANCE
Red-throated Loon	<i>Gavia stellata</i>		V
Pacific Loon	<i>Gavia pacifica</i>		E
Common Loon	<i>Gavia immer</i>		V
Yellow-billed Loon	<i>Gavia adamsii</i>		S
Pied-billed Grebe*	<i>Podilymbus podiceps</i>		V
Horned Grebe	<i>Podiceps auritus</i>		V
Red-necked Grebe	<i>Podiceps grisegena</i>		V
Eared Grebe	<i>Podiceps nigricollis</i>		E
Western Grebe	<i>Aechmophorus occidentalis</i>		E
Clark's Grebe	<i>Aechmophorus clarkii</i>		E
Laysan Albatross*	<i>Phoebastria immutabilis</i>		S
Black-footed Albatross*	<i>Phoebastria nigripes</i>		E
Short-tailed Albatross*	<i>Phoebastria albatrus</i>	E	S
Light-mantled Albatross	<i>Phoebastria palpebrata</i>		
Shy Albatross	<i>Thalassarche cauta</i>		
Northern Fulmar	<i>Fulmarus glacialis</i>		E
Pink-footed Shearwater	<i>Puffinus creatopus</i>		E
Flesh-footed Shearwater	<i>Puffinus carneipes</i>		V

Appendix E: Vertebrates
GFNMS Draft Management Plan

Buller's Shearwater	<i>Puffinus bulleri</i>		E
Sooty Shearwater	<i>Puffinus griseus</i>		E
Short-tailed Shearwater	<i>Puffinus tenuirostris</i>		E
Greater Shearwater	<i>Puffinus gravis</i>		
Black-vented Shearwater	<i>Puffinus opisthomelas</i>		V
Manx Shearwater	<i>Puffinus puffinus</i>		
Cook's Petrel	<i>Pterodroma cookii</i>		
Mottled Petrel	<i>Pterodroma inexpectata</i>		S
Dark-rumped Petrel	<i>Pterodroma phaeopygia</i>	T	
Murphy's Petrel	<i>Pterodroma ultima</i>		S
Fork-tailed Storm-Petrel*	<i>Oceanodroma furcata</i>		V
Leach's Storm-Petrel*	<i>Oceanodroma leucorhoa</i>		V
Ashy Storm-Petrel*	<i>Oceanodroma homochroa</i>		E
Wilson's Storm-Petrel	<i>Oceanites oceanicus</i>		
Black Storm-Petrel	<i>Oceanodroma melania</i>		
Least Storm-Petrel	<i>Oceanodroma microsoma</i>		
Brown Pelican	<i>Pelecanus occidentalis</i>	D	E
American White Pelican	<i>Pelecanus erythrorhynchos</i>		S
Magnificent Frigatebird	<i>Fregata magnificens</i>		
Great Frigatebird	<i>Fregata minor</i>		
Masked Booby	<i>Sula dactylatra</i>		
Brown Booby	<i>Sula leucogaster</i>		S
Red-footed Booby	<i>Sula sula</i>		
Red-billed Tropicbird	<i>Phaethon aethereus</i>		
Red-tailed Tropicbird	<i>Phaethon rubricauda</i>		
Brandt's Cormorant*	<i>Phalacrocorax penicillatus</i>		E
Double-crested Cormorant*	<i>Phalacrocorax auritus</i>		V
Pelagic Cormorant*	<i>Phalacrocorax pelagicus</i>		E
American Bittern	<i>Botaurus lentiginosus</i>	SC	S
Great Blue Heron*	<i>Ardea herodias</i>		E
Great Egret*	<i>Ardea alba</i>		E
Snowy Egret*	<i>Egretta thula</i>		V
Green Heron*	<i>Butorides virescens</i>		V
Black-crowned Night-Heron*	<i>Nycticorax nycticorax</i>		E
Turkey Vulture*	<i>Cathartes aura</i>		S
Canada Goose*	<i>Branta canadensis</i>	D (B.c. leucopareia)	S
Brant	<i>Branta bernicla</i>		E

Appendix E: Vertebrates
GFNMS Draft Management Plan

Gadwall*	<i>Anas strepera</i>		V
Eurasian Wigeon	<i>Anas penelope</i>		S
American Wigeon	<i>Anas americana</i>		E
Mallard*	<i>Anas platyrhynchos</i>		E
Blue-winged Teal	<i>Anas discors</i>		S
Cinnamon Teal*	<i>Anas cyanoptera</i>		V
Northern Shoveler	<i>Anas clypeata</i>		E
Northern Pintail	<i>Anas acuta</i>		E
Green-winged Teal	<i>Anas crecca</i>		V
Greater Scaup	<i>Aythya marila</i>		E
Lesser Scaup	<i>Aythya affinis</i>		S
Harlequin Duck	<i>Histrionicus histrionicus</i>		S
Surf Scoter	<i>Melanitta perspicillata</i>		E
White-winged Scoter	<i>Melanitta fusca</i>		E
Black Scoter	<i>Melanitta nigra</i>		E
Long-tailed Duck (Oldsquaw)	<i>Clangula hyemalis</i>		S
Bufflehead	<i>Bucephala albeola</i>		E
Common Goldeneye	<i>Bucephala clangula</i>		E
Red-breasted Merganser	<i>Mergus serrator</i>		V
Ruddy Duck*	<i>Oxyura jamaicensis</i>		E
Osprey*	<i>Pandion haliaetus</i>		E
Bald Eagle*	<i>Haliaeetus leucocephalus</i>	D	S
Northern Harrier	<i>Circus cyaneus</i>		S
Merlin	<i>Falco columbarius</i>		V
Peregrine Falcon*	<i>Falco peregrinus</i>	D	E
Praire Falcon*	<i>Falco mexicanus</i>		S
Black Rail	<i>Laterallus jamaicensis</i>		E
Virginia Rail	<i>Rallus limicola</i>		V
Yellow Rail	<i>Coturnicops noveboracensis</i>		S
Sora	<i>Porzana carolina</i>		V
American Coot*	<i>Fulica americana</i>		V
Black-bellied Plover	<i>Pluvialis squatarola</i>		E
Snowy Plover*	<i>Charadrius alexandrinus</i>	T	E
Semipalmated Plover	<i>Charadrius semipalmatus</i>		V
Killdeer*	<i>Charadrius vociferus</i>		V
Black Oystercatcher*	<i>Haematopus bachmani</i>		E
American Avocet	<i>Recurvirostra americana</i>		V

Appendix E: Vertebrates
GFNMS Draft Management Plan

Greater Yellowlegs	<i>Tringa melanoleuca</i>		V
Willet	<i>Catoptrophorus semipalmatus</i>		E
Wandering Tattler	<i>Heteroscelus incanus</i>		V
Spotted Sandpiper	<i>Actitis macularia</i>		V
Whimbrel	<i>Numenius phaeopus</i>		V
Long-billed Curlew	<i>Numenius americanus</i>		E
Marbled Godwit	<i>Limosa fedoa</i>		E
Ruddy Turnstone	<i>Arenaria interpres</i>		S
Black Turnstone	<i>Arenaria melanocephala</i>		E
Surfbird	<i>Aphriza virgata</i>		V
Red Knot	<i>Calidris canutus</i>		S
Sanderling	<i>Calidris alba</i>		E
Western Sandpiper	<i>Calidris mauri</i>		E
Least Sandpiper	<i>Calidris minutilla</i>		E
Rock Sandpiper	<i>Calidris ptilocnemis</i>		S
Dunlin	<i>Calidris alpina</i>		E
Short-billed Dowitcher	<i>Limnodromus griseus</i>		V
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>		V
Common Snipe	<i>Gallinago gallinago</i>		V
Wilson's Snipe	<i>Gallinago delicata</i>		V
Red-necked Phalarope	<i>Phalaropus lobatus</i>		E
Red Phalarope	<i>Phalaropus fulicaria</i>		E
Wilson's Phalarope	<i>Phalaropus tricolor</i>		
South Polar Skua	<i>Catharacta maccormicki</i>		V
Pomarine Jaeger	<i>Stercorarius pomarinus</i>		E
Parasitic Jaeger	<i>Stercorarius parasiticus</i>		E
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>		V
Bonaparte's Gull	<i>Larus philadelphia</i>		V
Heermann's Gull	<i>Larus heermanni</i>		E
Mew Gull	<i>Larus canus</i>		E
Ring-billed Gull*	<i>Larus delawarensis</i>		V
California Gull*	<i>Larus californicus</i>		E
Herring Gull	<i>Larus argentatus</i>		V
Thayer's Gull	<i>Larus thayeri</i>		V
Western Gull*	<i>Larus occidentalis</i>		E
Glaucous-winged Gull	<i>Larus glaucescens</i>		E
Glaucous Gull	<i>Larus hyperboreus</i>		S

Appendix E: Vertebrates
GFNMS Draft Management Plan

Sabine's Gull	<i>Xema sabini</i>		V
Swallow-tailed Gull	<i>Creagrus furcatus</i>		
Black-legged Kittiwake	<i>Rissa tridactyla</i>		V
Caspian Tern*	<i>Sterna caspia</i>		E
Elegant Tern*	<i>Sterna elegans</i>		E
Common Tern	<i>Sterna hirundo</i>		V
Arctic Tern	<i>Sterna paradisaea</i>		V
Forster's Tern*	<i>Sterna forsteri</i>		E
Sooty Tern	<i>Sterna fuscata</i>		
Common Murre*	<i>Uria aalge</i>		E
Thick-billed Murre	<i>Uria lomvia</i>		
Pigeon Guillemot*	<i>Cephus columba</i>		E
Marbled Murrelet*	<i>Brachyramphus marmoratus</i>	T	E
Long-billed Murrelet	<i>Brachyramphus perdix</i>		
Scripps's Murrelet	<i>Synthliboramphus scrippsi</i>		S
Craveri's Murrelet	<i>Synthliboramphus craveri</i>		S
Ancient Murrelet	<i>Synthliboramphus antiquus</i>		V
Cassin's Auklet*	<i>Ptychoramphus aleuticus</i>		E
Parakeet Auklet	<i>Aethia psittacula</i>		
Least Auklet	<i>Aethia pusilla</i>		
Crested Auklet	<i>Aethia cristatella</i>		
Rhinoceros Auklet*	<i>Cerorhinca monocerata</i>		E
Horned Puffin	<i>Fratercula corniculata</i>		S
Tufted Puffin*	<i>Fratercula cirrhata</i>		E
Short-eared Owl	<i>Asio flammeus</i>		S
Belted Kingfisher*	<i>Ceryle alcyon</i>		V
Black Phoebe*	<i>Sayornis nigricans</i>		S
Say's Phoebe	<i>Sayornis saya</i>		S
Common Raven*	<i>Corvus corax</i>		V
Horned Lark*	<i>Eremophila alpestris</i>		V
Tree Swallow*	<i>Tachycineta bicolor</i>		S
Northern Rough-winged Swallow*	<i>Stelgidopteryx serripennis</i>		V
Cliff Swallow*	<i>Petrochelidon pyrrhonota</i>		S
Barn Swallow*	<i>Hirundo rustica</i>		S
Rock Wren*	<i>Salpinctes obsoletus</i>		V
Marsh Wren	<i>Cistothorus palustris</i>		V
American Pipit	<i>Anthus rubescens</i>		S

Appendix E: Vertebrates
GFNMS Draft Management Plan

Yellow-rumped Warbler	<i>Dendroica coronata</i>		S
Savannah Sparrow*	<i>Passerculus sandwichensis</i>		V
Song Sparrow*	<i>Melospiza melodia</i>		V
Swamp Sparrow	<i>Melospiza georgiana</i>		S
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>		
Red-winged Blackbird*	<i>Agelaius phoeniceus</i>		V
Tricolored Blackbird*	<i>Agelaius tricolor</i>		
Western Meadowlark*	<i>Sturnella neglecta</i>		S

Appendix F: Invertebrates and Algae

GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY

INVERTEBRATES AND ALGAE

Compiled by Natalie Cosentino-Manning
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The following are lists of known algae and invertebrate species known to occur within and adjacent to the GFNMS. There are over 500 species of invertebrates and algae found in the intertidal regions of California alone, therefore these lists should be considered as a minimum inventory. Also included are invertebrates known from benthic surveys within the sanctuary. Species listed are represented at most intertidal sites within GFNMS as well as some offshore organisms. Species lists includes species found at the outer coast intertidal habitats on the Farallon Islands and along the Sonoma and Mendocino Counties, estuarine habitats at Tomales Bay, Bolinas Lagoon, Estero Americano, Estero de San Antonio, and deep-sea habitats at Rittenburg Bank, Cochrane Bank, the Farallon Escarpment, and The Football found 33 km west of the Russian River. As of 2013, documented species include: 238 invertebrate taxon, 138 red algal taxon, 29 brown algal taxon, 22 green algal taxon and 6 vascular plant species.

Appendix F: Invertebrates and Algae
GFNMS Draft Management Plan

References:

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Roletto, J., P. Etnoyer, G. Cochrane, E. Salgado, K. Graiff, G. Williams, K. Reyna, and J. Hyland. 2013. Characterization of deep-sea coral and sponge communities in Gulf of the Farallones National Marine Sanctuary: Rittenburg Bank, Cochrane Bank and Farallon Escarpment. A report to the NOAA Deep-sea Coral Research and Technology Program and Gulf of the Farallones National Marine Sanctuary, San Francisco, CA (*in prep*)

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
Annelida				
	<i>Arabella iricolor</i>			
	<i>Cheilonereis cyclurus</i>			
	<i>Errantia spp.</i>			
Polychaete	<i>Nereis guberi</i>			
	<i>Phragmatopoma californica</i>			
	<i>Phyllochaetopterus prolifica</i>			
	<i>Platynereis bicanaliculata</i>			
Tube worm	<i>Serpula vermicularis</i>			
	<i>Spirorbis borealis</i>			
	<i>Styrantheca prophyra</i>			
	<i>Terribellidae</i>			
	<i>Thelepus crispus</i>			
	<i>Typosyllis aciculata</i>			
Arthropoda				
	<i>Acanthomysis sp.</i>			
	<i>Achelia chelata</i>			

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
	<i>Achelia nudiscula</i>			
	<i>Achelia spinoseta</i>			
	<i>Allorchestes anceps</i>			
	<i>Alpheus dentipes</i>			
	<i>Ammonothea hilgendorfi</i>			
	<i>Amphiodia occidentalis</i>			
	<i>Amphissa columbiana</i>			
	<i>Anatanaïs normani</i>			
	<i>Balanus amphitrite</i>			
Barnacle	<i>Balanus cariosus</i>			
Barnacle	<i>Balanus glandula</i>			
Barnacle	<i>Balanus nubilus</i>			
	<i>Cancer antennarius</i>			
	<i>Cancer magister</i>			
	<i>Cancer productus</i>			
	<i>Caprella californica</i>			
	<i>Chthamalus dalli</i>			
	<i>Cirolana harfordi</i>			
	<i>Elasmopus serricatus</i>			
	<i>Emerita analoga</i>			
	<i>Euphausia pacifica</i>			
	<i>Exosphaeroma inornata</i>			
	<i>Exosphaeroma rhomburum</i>			
	<i>Fabia subquadrata</i>			
	<i>Hemigrapsus nudus</i>			
	<i>Hildenbrandia prototypus</i>			
	<i>Hyale frequens</i>			
	<i>Hyale grandicornis</i>			
	<i>Ianiropsis kincaidi</i>			
	<i>Idotea fewkesi</i>			
	<i>Idotea resicata</i>			
	<i>Idotea schmitti</i>			
	<i>Idotea sp.</i>			

Appendix F: Invertebrates and Algae
GFNMS Draft Management Plan

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
	<i>Idotea stenops</i>			
	<i>Idotea urotoma</i>			
	<i>Idotea vosnesenskii</i>			
	<i>Lecythorhynchus hilgendorfi</i>			
	<i>Ligia occidentalis</i>			
	<i>Ligia pallasii</i>			
	<i>Limnoria algarum</i>			
	<i>Littorophiloscia richardsonae</i>			
	<i>Lophopanopeus leucomanus</i>			
Crab	<i>Loxorhynchus crispatus</i>			
	<i>Melita californica</i>			
	<i>Metacaprella anomala</i>			
	<i>Metacaprella kennerlyi</i>			
	<i>Nymphopsis spinosissima</i>			
	<i>Oedignathus inermis</i>			
	<i>Oligochinus lighti</i>			
	<i>Pachycheles rudis</i>			
Crab	<i>Pachygrapsus crassipes</i>			
	<i>Pachygrapsus nudus</i>			
	<i>Pagurus granosimanus</i>			
Hermit crab	<i>Pagurus hirsutiussculus</i>			
	<i>Pagurus samuelensis</i>			
	<i>Pagurus sp.</i>			
	<i>Paracerceis cordata</i>			
	<i>Paradynoides benedicti</i>			
	<i>Parallorchestes ochotensis</i>			
	<i>Paranthura elegans</i>			
	<i>Paraxanthia taylorii</i>			
	<i>Petrolisthes cinctipes</i>			
	<i>Pinnixa franciscana</i>			
	<i>Pollicipes polymerus</i>			

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
	<i>Polycheria osborni</i>			
	<i>Porcellio americanus</i>			
Crab	<i>Pugetia fragilissima</i>			
Crab	<i>Pugettia gracilis</i>			
Crab	<i>Pugettia producta</i>			
Sea spider	<i>Pycnogonum rickettsi</i>			
Sea spider	<i>Pycnogonum stearnsi</i>			
Crab	<i>Scyra acutifrons</i>			
Barnacle	<i>Semibalanus cariosus</i>			
	<i>Semibalanus sp.</i>			
Barnacle	<i>Tetraclita rubescens</i>			
	<i>Thysanoessa spinifera</i>			
Chordata				
	<i>Aplidium arenatum</i>			
Tunicate	<i>Aplidium californicum</i>	Co	Co	BC - Baja
Tunicate	<i>Cystodytes lobatus</i>	Co	Co	BC - Baja
Tunicate	<i>Didemnum carnulentum</i>	Co	Co	OR - c.AM
	<i>Polyclinum planum</i>			
Tunicate	<i>Pycnoclayella stanleyi</i>	Co	Co	BC - Baja
Tunicate	<i>Ritterella aequalisphonis</i>	Ab	Co	WA - s. CA+
Cnidaria				
Fern hydroid	<i>Abietinaria sp.</i>	Co	Co	AK - s.CA
	<i>Aglaophenia inconspicua</i>			
Ostrich-plume hydroid	<i>Aglaophenia latirostris</i>	Ab	Co	AK - s. CA
	<i>Aglaophenia sp</i>			
Aggregating anemone	<i>Anthopleura elegantissima</i>	Ab	Ab	AK - Baja
Giant green anemone	<i>Anthopleura xanthogrammica</i>	Co	Co	AK - C. Am
	<i>Aurelia aurita</i>			
Orange cup coral	<i>Balanophyllia elegans</i>	Co	Co	OR - s. CA
	<i>Corynactis californica</i>			

Appendix F: Invertebrates and Algae
GFNMS Draft Management Plan

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
Poliferating anemone	<i>Epiactis prolifera</i>	Co	Co	AK - s.CA
	<i>Eudendrium californicum</i>			
	<i>Garveia annulata</i>	Ab	Co	AK - s. CA
White-plumed anemone	<i>Metridium senile</i>	Co	Co	AK - s. CA
	<i>Obelia</i> sp.			n.CA+
	<i>Sertularella turgida</i>			
	<i>Sertularia</i> sp.			
Sea pen	<i>Stylatula elongata</i>	Co	Co	n. CA - s. CA
	<i>Tealia crassicornis</i>	Co	Co	AK - c.CA+
	<i>Tealia lofotensis</i>	Co	Co	WA - s. CA
	<i>Tubularia crocea</i>			
	<i>Urticina crassicornia</i>			
	<i>Urticina lofotensis</i>			
Echinodermata				
	<i>Amphipholis squamata</i>			
	<i>Asterina miniata</i>			
Sea cucumber	<i>Cucumaria curata</i>	rare	rare	c.CA
Sea cucumber	<i>Cucumaria pseudocurata</i>	Co	Co	BC -c. CA
Leather star	<i>Dermasterias imbricata</i>	Co	Co	AK - s.CA
Blood star	<i>Henricia leviuscula</i>	Co	Co	AK - Baja
	<i>Leptasterias aequalis</i>			
6-rayed star	<i>Leptasterias hexactis</i>	Co	Co	WA - s.CA
	<i>Leptasterias puscilla</i>			
	<i>Ophiopholis aculeata</i>			
	<i>Ophioplocus papillosa</i>			
Brittle star	<i>Ophiothrix spiculata</i>	Co	Co	c.CA - s.Am
Sea cucumber	<i>Parastichopus</i>	UnCo	Co	c.CA -

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
	<i>parvimensis</i>			Baja
Bat star	<i>Patiria miniata</i>	Co	Co	AK - Baja
	<i>Pisaster giganteus</i>			
Ochre star	<i>Pisaster ochraceus</i>	Ab	Co	Ak - c.CA
Sunflower star	<i>Pycnopodia helianthoides</i>	Co	Co	AK - s.CA
	<i>Strongylocentrotus droebachiensis</i>			
Red sea urchin	<i>Strongylocentrotus franciscanus</i>	Co	Unco	AK - Baja+
Purple sea urchin	<i>Strongylocentrotus purpuratus</i>	Ab	Co	BC - Baja
Ectoprocta				
	<i>Barentsia benedeni</i>			
Bryozoan	<i>Bugula californica</i>	Ab	Co	BC - s. Am
	<i>Crisia maxima</i>			
Bryozoan	<i>Dendrobeania laxa</i>	Ab	Ab	BC - s.CA
	<i>Dendrobeania lichenoides</i>			
	<i>Eurystomella bilabiata</i>			
Bryozoan	<i>Flustrellidra corniculata</i>	Co	Co	AK - c.CA
	<i>Tricellaria occidentalis</i>			
	<i>Tricellaria sp</i>			
	<i>Tricellaria ternata</i>			
Mollusca				
Angular unicorn	<i>Acanthina spirata</i>	Co	Co	n. CA - Baja
	<i>Acanthina spp.</i>			
	<i>Acanthodoris nanaimoensis</i>			
	<i>Aclis shepardiana</i>			
White capped limpet	<i>Acmaea mitra</i>	Co	Co	AK - Baja
Shag-rug nudibranch	<i>Aeolidia papillosa</i>	Co	Co	n.CA - s.CA+
	<i>Alia carinata</i>			

Appendix F: Invertebrates and Algae
GFNMS Draft Management Plan

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
Variegated amphissa	<i>Amphissa versicolor</i>	Co	Co	n. CA - Baja
Sea lemon	<i>Anisodoris nobilis</i>	Co	Co	BC - Baja
	<i>Antiopella barbarensis</i>			
Monterey dorid	<i>Archidoris montereyensis</i>	Co	Co	AK - s.CA
	<i>Balcis thersites</i>			
	<i>Baptodoris mimetica</i>			
Snail	<i>Barleeia haliotiphila</i>			
Snail	<i>Barleeia subtenuis</i>			
Horn snail	<i>Batillaria attramentaria</i>	Co	Co	BC - c. CA
Threaded bittium	<i>Bittium eschrichtii</i>	Unco	Co	AK - Baja
	<i>Bittium purpureum</i>			
	<i>Bittium schrichtii</i>			
	<i>Cadlina luteomarginata</i>			
Yellow-edged cadlina	<i>Cadlina modesta</i>	Co	Co	BC - Baja
Channeled top snail	<i>Calliostoma canaliculatum</i>	Co	Co	AK - Baja
Blue top snail	<i>Callistoma ligatum</i>	Co	Co	AK - s.CA
	<i>Ceratostoma foliatum</i>			
	<i>Cerithiopsis carpenteri</i>			
	<i>Chama arcana</i>			
	<i>Collisella scabra</i>			
	<i>Corolla spectabilis (Pteropod)</i>			
Pacific oyster	<i>Crassostrea gigas</i>	Co	Co	BC - s.CA
Hooked slipper snail	<i>Crepidula adunca</i>	Co	Co	BC - Baja
	<i>Crepidula nummaria</i>			
	<i>Crepidula perforans</i>			
	<i>Crepidatella lingulata</i>			
Gumboot chiton	<i>Cryptochiton stelleri</i>	Rare	Co-Rare	AK - s.CA+
	<i>Cryptomya californica</i>			

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
	<i>Cymakra aspera</i>			
	<i>Daphana californica</i>			
	<i>Diaphana californica</i>			
Ring spotted dorid	<i>Diaulula sandiegensis</i>	Co	Co	AK - Baja
	<i>Diplodonta orbella</i>			
	<i>Discurria scutum</i>			
	<i>Dirona picta</i>			
	<i>Doto columbiana</i>	Unco	Unco	BC - n.CA
	<i>Entodesma saxicola</i>			
Snail	<i>Epitonium tinctum</i>			
	<i>Fissurella volcano</i>			
	<i>Fusinus luteopictus</i>			
	<i>Granula margaritula</i>			
Black Abalone	<i>Haliotis cracherodii</i>	UnCo	Co	c. CA - Baja
	<i>Haliotis racherodii</i>			
Red Abalone	<i>Haliotis rufescens</i>	Co	Unco	OR - Baja
Hermisenda	<i>Hermisenda crassicornis</i>	Co	Co	AK - Baja
	<i>Hiatella arctica</i>			
	<i>Hinnites giganteus</i>			
Hoof snail	<i>Hipponix craniodes</i>	Co	Co	BC - Baja+
Hopkin's Rose	<i>Hopkinsia rosacea</i>	Co	Co	OR - Baja
	<i>Irus lamellifer</i>			
Chiton	<i>Ischnochiton regularis</i>			
Chiton	<i>Katharina tunicata</i>			
	<i>Kellia laperousii</i>			
	<i>Lacuna cistula</i>			
Chink snail	<i>Lacuna marmorata</i>	Co	Co	AK - s.CA
	<i>Lacuna porrecta</i>			
	<i>Lacuna unifasciata</i>			
	<i>Lasaea cistula</i>			
Clam	<i>Lasaea subviridis</i>	Ab	Co	AK - Baja
Chiton	<i>Lepidochitona dentiens</i>			

Appendix F: Invertebrates and Algae
GFNMS Draft Management Plan

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
	<i>Lepidozona sinudentata</i>			
	<i>Littorina keanae</i>			
Eroded periwinkle	<i>Littorina planaxis</i>	Ab	Ab	WA - Baja
Checkered periwinkle	<i>Littorina scutulata</i>	Ab	Ab	AK - Baja
	<i>Littorina sitkana</i>			
	<i>Littorina sp.</i>			
	<i>Lottia asmi</i>			
Ribbed limpet	<i>Lottia digitalis</i>	Ab	Co	AK - Baja
Owl limpet	<i>Lottia gigantea</i>	Ab	Co	WA - Baja
Unstable seaweed limpet	<i>Lottia instabilis</i>	Ab	Co	AK - s.CA
File limpet	<i>Lottia limantula</i>	Co	Ab	OR - s.Baja
Shield limpet	<i>Lottia pelta</i>	Co	Co	AK - Baja
	<i>Lottia strigatella</i>			
Triangular limpet	<i>Lottia triangularis</i>	Co	Co	AK - Baja
Rough limpet	<i>Macclintockia scabra</i>	Ab	Co	OR - Baja
	<i>Milneria minima</i>			
	<i>Mitrella carinata</i>			
	<i>Mitrella tuberosa</i>			
Fat horse mussel	<i>Modiolus capax</i>	Co	Co	c.CA - S.AM
	<i>Modiolus carpenti</i>			
Hairy chiton	<i>Mopalia ciliata</i>	Co	Co	AK - Baja
Mossy chiton	<i>Mopalia muscosa</i>	Co	Co	BC - Baja
Pygmy mussel	<i>Musculus pygmaeus</i>	Ab	Co	c.CA
	<i>Mytilimeria nuttallii</i>			
California mussel	<i>Mytilus californianus</i>	Ab	Ab	AK - Baja
Bay mussel	<i>Mytilus edulis</i>	Co	Co	AK - Baja+
	<i>Nassarius mendicus</i>			
Limpet	<i>Notoacmea insessa</i>			
Limpet	<i>Notoacmea persona</i>			

Appendix F: Invertebrates and Algae
GFNMS Draft Management Plan

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
Channeled dogwinkle	<i>Nucella canaliculata</i>	Ab	Co	Ak - c.CA
Emarginate dogwinkle	<i>Nucella emarginata</i>	Ab	Co	Ak - n. Baja
Chiton	<i>Nuttallina californica</i>	Co	Co	WA - s. CA
	<i>Ocenebra atropurpurea</i>			
	<i>Ocenebra interfossa</i>			
	<i>Ocenebra lurida</i>			
	<i>Octopus dofleini</i>			
	<i>Octopus rubescens</i>			
	<i>Octopus sp.</i>			
	<i>Odostomia sp.</i>			
	<i>Onchidella borealis</i>			
	<i>Opalia wroblewskyi</i>			
Olympic oyster	<i>Ostrea lurida</i>	Rare	Rare-Co	AK - Baja
	<i>Palciphorella velatta</i>			
	<i>Penitella conradi</i>			
	<i>Penitella turnerae</i>			
	<i>Petalconchus montereyensis</i>			
	<i>Petricola carditoides</i>			
	<i>Philobrya setosa</i>			
Abalone jingle	<i>Pododesmus cepio</i>	Co	Co	AK - Baja
	<i>Protothaca staminea</i>			
Red sponge nudibranch	<i>Rostanga pulchra</i>	Ab	Ab	BC - Baja
Dire welk	<i>Searlesia dira</i>	Co	Co	AK - c.CA
	<i>Stenoplax heathiana</i>			
Streaked stiliger	<i>Stiliger fuscovittatus</i>	Ab	Ab	WA - Baja
	<i>Tectura insessa</i>			
	<i>Tectura persona</i>			
	<i>Tectura scutum</i>			
Brown turban snail	<i>Tegula brunnea</i>	Ab	Ab	OR - s. CA
Black turban	<i>Tegula funebris</i>	Ab	Co-Ab	BC - Baja

Appendix F: Invertebrates and Algae
GFNMS Draft Management Plan

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
snail				
Lined chiton	<i>Tonicella lineata</i>	Ab	Co	AK - s.CA+
	<i>Transennella tantilla</i>			
Reticulate button snail	<i>Trimusculus reticulatus</i>	Co	Co	OR - MEX
Sea-clown nudibranch	<i>Triopha catalinae</i>	Co	Co	AK - Baja
	<i>Triopha maculata</i>			
	<i>Trivia californica</i>			
	<i>Velutina velutina</i>			
Nemertea				
	<i>Emplectonema gracile</i>			
	<i>Tubulanus sexlineatus</i>			
Porifera				
Sponge	<i>Acarnus erithacus</i>			
	<i>Allopora porphyra</i>			
Sponge	<i>Anaata spongigartina</i>			
	<i>Antho lithophoenix</i>			
Keratose sponge	<i>Aplysilla glacialis</i>	Ab	Ab	
	<i>Aplysilla polyraphis</i>			
Sponge	<i>Axocelita originalis</i>			
	<i>Clathria sp.</i>			
	<i>Cliona celata</i>			
Sponge	<i>Geodia mesotriaence</i>	Co	Co	AK - Mex
Crumb-of-bread sponge	<i>Halichondria panicea</i>	Ab	Ab	n.CA
	<i>Halichondria sp.</i>			
	<i>Haliclona permollis</i>			
Sponge	<i>Haliclona sp.</i>	Ab	Ab	n. CA +
	<i>Higginsia sp.</i>			
	<i>Hinksia sandriana</i>			
	<i>Hymedesmia sp.</i>			
	<i>Hymenamphiastra</i>			

Invertebrates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	POPEST (Sanctuary)	POPEST (N.E. Pacific)	RANGE
	<i>cyanocrypta</i>			
Sponge	<i>Leucandra heathi</i>			
Sponge	<i>Leucilla nuttingi</i>			
Sponge	<i>Leucosolenia eleanor</i>			
Sponge	<i>Lissodendoryx firma</i>			
Sponge	<i>Lissodendoryx topsenti</i>			
Sponge	<i>Mycale psila</i>			
	<i>Myxilla incrustans</i>			
Sponge	<i>Ophlitaspongia pennata</i>	Ab	Co	BC - Mex
	<i>Scypha sp.</i>			
	<i>Spongia idia</i>			
Sponge	<i>Stelletta clarella</i>			
Sponge	<i>Suberites sp.</i>			
Sponge	<i>Tedania gurjanovae</i>			
Sponge	<i>Tethya aurantia</i>	Co	Co	BC - Mex+
Sponge	<i>Toxidocia sp.</i>			
Sponge	<i>Xestospongia vanilla</i>			
Sponge	<i>Zygherpe hyaloderma</i>			
Sipuncula				
	<i>Phascolosoma agassizii</i>			
Urochordata				
	<i>Archidistoma ritteri</i>			
	<i>Styela montereyensis</i>	Co	Co	BC - Baja
	<i>Styela truncata</i>	Co	Co	AK - s.CA

Appendix G: Introduced Species

GULF OF THE FARALLONES NATIONAL MARINE SANCTUARY

INTRODUCED SPECIES INVERTEBRATES AND ALGAE

Compiled by Jarrett Byrnes
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The Introduced Species list is for species in and around the Gulf of the Farallones National Marine Sanctuary (GFNMS), the Northern Management Area, and the Cordell Bank National Marine Sanctuary (CBNMS). The list was obtained by comparing lists of species within and around sanctuary waters to lists of known invaders within California, Bodega Harbor, Tomales Bay, and Elkhorn Slough. The list should therefore be regarded as conservative, including some species that may not yet be within Sanctuary waters per se, but given their geographic proximity, have a high probability of invading in the near future. Some of these species (e.g. *Ficopomatus enigmaticus*), may therefore qualify for the so-called “dirty-dozen” status based on impacts in other habitats despite not being found within Sanctuary waters. The sources used and their abbreviations are noted in column “Listing Sources(s).”

cb	Current species list for CBNMS as provided by Dan Howard (2002)
nma	Current species list for the Northern Management Area (2002)
bird	Species list from the Bird Rock Area of Special Biological Significance (ASBS) Report
nas	The USGS Nonindigenous Aquatic Species listing for California, found at http://nas.er.usgs.gov
bth	List of species identified during the all taxa biological inventory by Leslie Harris
gf	Current species list for GFNMS as provided by Jan Roletto (2002)
bod	Listing of introduced species in Bodega Harbor by Jim Carlton
neers	Listing of introduced species within the Elkhorn Slough National Estuarine Research Reserve System (NERRS) site
CDFW	California Department of Fish and Wildlife’s (CDFW) Nonindigenous Aquatic Species list
amer	Species list from the Estero Americano and Estero de San Antonion ASBS report (1977)
fitz	Species list from the Fitzgerald Reserve ASBS report (1979)
elk	Updated list of invasive species in and around the Elkhorn Slough NERRS site provided by Kirsten Wasson
bth	CDFW’s amended list of introduced species in Bodega Bay and Tomales Bay

Appendix G: Introduced Species
GFNMS Draft Management Plan

- * Entries marked with a * indicate that while the species may not have been included in a given list, there was an entry for the genus listed as a “sp.”.
 Entries who only have starred listing sources should be viewed with caution.

INTRODUCED SPECIES

Algae

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
	<i>Aglaothamnion cordatum</i>		btc	btc
Dead Man's Fingers	<i>Codium fragile tomentosoides</i>	btc	btc, CDFW	
	<i>Gelidium vagum</i>	<i>Gelidium sp.</i>	btc, nma*	btc, CDFW
Red Siphonweed	<i>Polysiphonia denudata</i>	<i>Polysiphonia sp.</i>	nma*	CDFW
British Wireweed	<i>Sargassum muticum</i>		nma, elk	elk, CDFW
Wakame	<i>Undaria pinnatifida</i>		elk	elk, CDFW

Marsh Plants

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
Brassbuttons	<i>Cotula coronopifolia</i>		bod	bod
European Sea Rocket	<i>Cakile maritima</i>		bod	bod
Russian Thistle	<i>Salsola soda</i>		bod	CDFW, bod

Sponges

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
	<i>Cliona celata</i>	<i>Cliona sp.</i>	neers, nma, elk, bird*	neers, elk, neers*
	<i>Cliona lobata</i>	<i>Cliona sp.</i>	neers	neers
	<i>Halichondria bowerbanki</i>	<i>Halichondria panicea</i> , <i>Halichondria coalita</i> , <i>Halichondria sp.</i>	btc, bird, neers, elk, cb*, nma*	btc, CDFW, neers, elk
	<i>Haliclona loosanoffi</i>	<i>Haliclona sp.</i>	neers, elk, bod, bird*, gf*, nma*	CDFW, neers, elk, bod, nas*
	<i>Hymeniacidon sinapium</i>	<i>Hymeniacidon sp.</i>	neers, elk, bird*	neers, elk, CDFW*
	<i>Prosuberites sp.</i>		bird	CDFW

Cnidarians

Appendix G: Introduced Species
GFNMS Draft Management Plan

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
	<i>Amphinema sp.</i>		bod	bod
Moon Jelly	<i>Aurelia aurita</i>	<i>Aurelia dubia</i> , <i>Aurelia</i> <i>flavidula</i>	gf, nma	CDFW
	<i>Cordylophora caspia</i>		neers, elk	CDFW, neers, elk
San Francisco Anemone	<i>Diadumene franciscana</i>		btc, neers, elk	btc, CDFW, neers, elk
White Anemone	<i>Diadumene leucolena</i>	<i>Cylista</i> <i>leucolena</i>	neers, elk	CDFW, neers, elk
	<i>Haliplanella lineata</i>	<i>Diadumene</i> <i>lineata</i>	bod, neers, elk	CDFW, bod, neers, elk
Doubletoothed Hydroid	<i>Obelia bidentata</i>	<i>Obelia sp.</i>	bird*, gf*, nma*	CDFW, nas
Sea Thread Hydroid	<i>Obelia dichotoma</i>	<i>Obelia sp.</i>	bod, bird*, gf*, nma*	nas, CDFW, bod
Clapper Hydromedusa	<i>Sarsia tubulosa</i>	<i>Oceania</i> <i>tubulosa</i>	neers	CDFW, neers
	<i>Tubularia crocea</i>	<i>Ectopleura</i> <i>crocea</i>	amer, gf, nma, neers, elk	CDFW, neers, elk

Platyhelminthes

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
	<i>Cercaria batillariae</i>		neers, elk	CDFW, neers, elk
Annelids				
	<i>Apoprionospio pygmaea</i>		btc	btc
Bristleworm	<i>Capitella capitata</i> Complex	<i>Capitella sp.</i>	btc, tmh*	btc,
	<i>Ctenodrilus serratus</i>	<i>Parthenope</i> <i>serratus</i>	btc	btc
	<i>Dipolydora socialis</i>		btc, tmh	btc
	<i>Euchone limnicola</i>		btc, tmh	btc
	<i>Exogone lourei</i>		btc, tmh	btc
Tube Worm	<i>Ficopomatus enigmaticus</i>	<i>Mercierella</i> <i>enigmatica</i>	neers, elk	CDFW, neers, elk
polychate	<i>Glycera americana</i>		btc	btc
polychate	<i>Harmothoe imbricata</i>	<i>Aphrodita</i> <i>imbricata</i>	btc, bird	btc
polychate	<i>Heteromastus filiformis</i>		neers, elk	CDFW, neers, elk
polychate	<i>Mediomastus ambiseta</i>		btc	btc
polychate	<i>Neanthes succinea</i>	<i>Nereis</i> <i>succinea</i> , <i>Nereis limbata</i>	btc	btc, CDFW
polychate	<i>Notomastus hemipodus</i>		btc	btc

Appendix G: Introduced Species
GFNMS Draft Management Plan

polychate	<i>Platynereis bicanaliculata</i>		btc, bird, nma	btc
spionid	<i>Polydora amarincola</i>	<i>Polydora sp.</i>	bird*, amer*	CDFW
Mud Worm	<i>Polydora cornuta</i>	<i>Polydora sp.</i>	bod, bird*, amer*	nas, CDFW, bod
Mud Worm	<i>Polydora ligni</i>	<i>Polydora sp.</i>	neers, elk, bird*, amer*	CDFW, neers, elk
spionid	<i>Pseudopolydora kemp</i>		btc, bod, tmh	btc, CDFW, bod,
spionid	<i>Pseudopolydora paucibranchiata</i>	btc, neers, elk, bod	btc, CDFW, neers, elk, bod	
spionid	<i>Streblospio benedicti</i>		btc, amer, neers, elk, bod, tmh	btc, CDFW, neers, elk, bod,

Crustaceans

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
	<i>Ampelisca abdita</i>		btc	btc, CDFW
	<i>Ampelisca agassizi</i>	<i>Ampelisca compressa</i> , <i>Ampelisca vera</i>	btc	btc
	<i>Ampithoe lacertosa</i>	<i>Ampithoe sp.</i>	btc, bird*	btc
	<i>Ampithoe valida</i>	<i>Ampithoe sp.</i>	neers, elk, bod, tmh, bird*	CDFW, neers, elk, bod, nas
	<i>Caprella acanthogaster</i>		btc	btc, CDFW
	<i>Caprella californica</i>		btc, gf, nma	btc
Skeleton Shrimp	<i>Caprella mutica</i>		btc, neers	btc, CDFW, neers
	<i>Corophium acherusicum</i>		elk, bod	CDFW, elk, bod
	<i>Corophium alienense</i>		btc, bod	btc, CDFW, bod
	<i>Corophium insidiosum</i>		btc, elk, bod	btc, CDFW, elk, bod
	<i>Corophium uenoi</i>		elk	CDFW, elk
	<i>Erichthonius brasiliensis</i>		btc	btc, CDFW
	<i>Grandidierella japonica</i>		btc, neers, elk	btc, CDFW, neers, elk
	<i>Jassa carltoni</i>		btc	btc
	<i>Jassa marmorata</i>		btc, neers, elk, bod	btc, CDFW, neers, elk, bod
	<i>Jassa slatteryi</i>		btc	btc
	<i>Leucothoe alata</i>		btc	btc, CDFW
	<i>Melita nitida</i>		neers, elk	CDFW, neers, elk
	<i>Monocorophium acherusicum</i>	btc, neers	btc, CDFW, neers	
	<i>Monocorophium insidiosum</i>		neers	neers
	<i>Monocorophium uenoi</i>		neers	neers
	<i>Parapleustes derzhavini</i>		btc, neers, elk	btc, CDFW,

Appendix G: Introduced Species
GFNMS Draft Management Plan

				neers, elk
	<i>Sinocorophium alienense</i>		btc	btc, CDFW
	<i>Sinocorophium heteroceratum</i>	btc	btc, CDFW	
	<i>Iais californica</i>		neers, elk, bod, tmh	CDFW, neers, elk, bod,
	<i>Ianiropsis tridens</i>		btc	btc, CDFW
	<i>Laticorophium baconi</i>		btc, tmh	btc
	<i>Limnoria quadripunctata</i>		neers	CDFW, neers
	<i>Limnoria tripunctata</i>		bod	CDFW, bod
	<i>Paranthura elegans</i>		btc, nma, tmh	btc, CDFW
Sphaeromatid Isopod	<i>Sphaeroma quoyanum</i>		btc, neers, elk	btc, CDFW, neers, elk
mysid	<i>Acanthomysis aspera</i>	<i>Acanthomysis sp.</i>	gf*, nma*	CDFW, nas
mysid	<i>Acanthomysis bowmani</i>	<i>Acanthomysis sp.</i>	gf*, nma*	CDFW, nas
barnacle	<i>Balanus amphitrite</i>	<i>Balanus sp.</i>	nma, nma*	CDFW, CDFW
barnacle	<i>Balanus improvisus</i>	<i>Balanus sp.</i>	neers, elk, nma*	CDFW, neers, elk, nas
Green Crab	<i>Carcinus maenas</i>	<i>Carcinides maenas</i>	btc, neers, bod	btc, CDFW, neers, bod
cumacean	<i>Cumella vulgaris</i>		btc	btc
tanaid	<i>Leptochelia dubia</i>	<i>Leptochelia affinis,</i> <i>Leptochelia algicola,</i> <i>Leptochelia corsica,</i> <i>Leptochelia durbanensis,</i> <i>Leptochelia edwardsii,</i> <i>Leptochelia incerta ,</i> <i>Leptochelia lifuensis ,</i> <i>Leptochelia neapolitana ,</i> <i>Leptochelia savignyi ,</i> <i>Paratanais algicola ,</i> <i>Paratanais edwardsii ,</i> <i>Paratanais kroyerii ,</i> <i>Paratanais savignyi ,</i> <i>Tanaiomera columbina ,</i> <i>Tanais dubius ,</i> <i>Tanais durbanensis ,</i> <i>Tanais</i>	btc	btc

Appendix G: Introduced Species
GFNMS Draft Management Plan

		<i>edwardsi</i> , <i>Tanais filum</i>		
Red Worm (copepod)	<i>Mytilicola orientalis</i>		neers, elk	CDFW, neers, elk
Asian cumacean	<i>Nippoleucon hinumensis</i>		btc	btc, CDFW
Korean Shrimp	<i>Palaemon macrodactylus</i>		neers	CDFW, neers
copepod	<i>Pseudodiaptomus marinus</i>		btc	btc, CDFW
tanaid	<i>Sinelobus sp.</i>		neers, elk	CDFW, neers, elk

Molluscs

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
Pacific Giant Oyster	<i>Crassostrea gigas</i>		gf, nma	CDFW
Amethyst Gemclam	<i>Gemma gemma</i>		btc, neers, bod	btc, CDFW, neers, bod
Blacktip Shipworm	<i>Lyrodus pedicellatus</i>		neers, elk	CDFW, neers, elk
Baltic Macoma	<i>Macoma balthica</i>		bod	CDFW, bod
Northern Quahog	<i>Mercenaria mercenaria</i>	<i>Venus mercenaria</i>	btc	btc, CDFW
Green Mussel	<i>Musculista senhousia</i>		btc, neers, bod	btc, CDFW, neers, bod
Softshell Clam	<i>Mya arenaria</i>		btc, amer, neers, bod	btc, CDFW, neers, bod
Mediterranean mussel	<i>Mytilus galloprovincialis</i>		neers, elk, bod	CDFW, neers, elk, bod
Mahogany Clam	<i>Nutallia nutallia</i>		elk	elk
Purple-Mahogany Clam	<i>Nuttallia obscurata</i>		neers	neers
Edible oyster	<i>Ostrea edulis</i>		btc	btc, CDFW
Olympia Oyster	<i>Ostrea lurida</i>		gf, nma	CDFW
Wing Oyster	<i>Pteria sterna</i>		btc	btc, CDFW
Asian semele	<i>Theora lubrica</i>		btc	btc, CDFW
Japanese Littleneck Clam	<i>Venerupis philippinarum</i>		btc, neers, bod	btc, CDFW, neers, bod
Japanese False Cerith	<i>Batillaria attramentaria</i>		btc, gf, neers, nma, elk	btc, CDFW, neers, elk
Japanese oyster drill	<i>Ceratostoma inornatum</i>		btc	btc, CDFW
European Melampus	<i>Myosotella myosotis</i>		neers, elk, bod	CDFW, neers, elk, bod
Easterm Mud Snail	<i>Nassarius obsoletus</i>	<i>Ilyanassa obsoleta</i> , <i>Nassa obsoleta</i>	btc	btc, CDFW
Flat Okenia	<i>Okenia plana</i>		neers, elk	CDFW, neers, elk
nudibranch	<i>Philine auriformis</i>		btc, neers, bod	btc, CDFW, neers, bod
nudibranch	<i>Philine orientalis</i>		bod	bod

Appendix G: Introduced Species
GFNMS Draft Management Plan

Miniature Aeolis	<i>Tenellia adspersa</i>	<i>Embletonia pallida</i>	neers, elk	CDFW, neers, elk
Atlantic Oyster Drill	<i>Urosalpinx cinerea</i>		btc, neers	btc, CDFW, neers

Bryozoans

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
	<i>Alcyonidium gelatinosum</i>		btc	btc, CDFW
	<i>Alcyonidium parasiticum</i>		btc	btc
	<i>Alcyonidium polyomm</i>		btc	btc, CDFW
	<i>Amathia vidovici</i>		neers, elk	CDFW, neers, elk
	<i>Barentsia benedeni</i>		gf, neers, nma, elk	CDFW, neers, elk
	<i>Bowerbankia gracilis</i>		btc, neers, elk, bod	btc, CDFW, neers, elk, bod
	<i>Bugula neritina</i>		btc, bird, neers, elk, bod	btc, CDFW, neers, elk, bod
	<i>Bugula stolonifera</i>		neers, elk	CDFW, neers, elk
	<i>Conopeum tenuissimum</i>		neers, elk	CDFW, neers, elk
	<i>Cryptosula pallasiana</i>		btc, neers, elk, bod	btc, CDFW, neers, elk, bod
Single Horn Bryozoan	<i>Schizoporella unicornis</i>	<i>Lepralia unicornis</i>	btc, neers, elk, bod	btc, CDFW, neers, elk, bod
	<i>Victorella pavidia</i>		btc	btc, CDFW
	<i>Watersipora subtorquata</i>		btc, neers, elk, bod	btc, CDFW, neers, elk, bod

Chordates

CLASSIFICATION & COMMON NAME	SCIENTTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
tunicate	<i>Ascidia zara</i>		btc	btc, nas, CDFW
tunicate	<i>Botrylloides perspicuum</i>		btc	btc, nas, CDFW
tunicate	<i>Botrylloides violaceus</i>		btc, neers, elk, bod	btc, nas, neers, elk, bod
tunicate	<i>Botryllus schlosseri</i>		btc, gf, bod	btc, CDFW, bod
tunicate	<i>Ciona intestinalis</i>	<i>Ascidia intestinalis</i>	btc, gf	btc, CDFW
tunicate	<i>Ciona savignyi</i>		btc	btc, nas, CDFW
tunicate	<i>Didemnum lahillei</i>	<i>Didemnum vexillum</i>	--	nas
tunicate	<i>Diplosoma listerianum</i>		btc	btc, CDFW

Appendix G: Introduced Species
GFNMS Draft Management Plan

tunicate	<i>Molgula manhattensis</i>	<i>Ascidia manhattensis</i> , <i>Gymnocystis manhattensis</i>	btc, neers, elk	btc, CDFW, neers, elk
tunicate	<i>Polyandrocarpa zorritensis</i>		btc	btc, CDFW
tunicate	<i>Styela clava</i>		btc, neers, elk	btc, CDFW, neers, elk
Yellowfin goby	<i>Acanthogobius flavimanus</i>		gf, nma, elk	CDFW, elk
Atlantic Shad	<i>Alosa sapidissima</i>		gf, nma, elk	CDFW, elk
European Carp	<i>Cyprinus carpio</i>		amer	CDFW
Mosquitofish	<i>Gambusia affinis</i>	<i>Gambusia patruelis</i>	elk, amer	CDFW, elk
Rainwater Killifish	<i>Lucania parva</i>		amer	CDFW
Striped Bass	<i>Morone saxatilis</i>	<i>Roccus saxatilis</i>	gf, nma, elk	CDFW, elk
North American Bullfrog	<i>Rana catesbeiana</i>		amer	CDFW

Chordates

CLASSIFICATION & COMMON NAME	SCIENTIFIC NAME	Synonyms	Listing Source(s)	Invasive Status Source(s)
ciliate	<i>Prionospio pygmaea</i>	<i>Ancistrocoma pelseneeri</i>	btc	btc, CDFW
foraminifera	<i>Trochammina hadai</i>		bod	CDFW, bod

CORDELL BANK NATIONAL MARINE SANCTUARY



DRAFT MANAGEMENT PLAN

UPDATED IN RESPONSE TO THE PROPOSED SANCTUARY EXPANSION

UPDATED APRIL 2014

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
OFFICE OF NATIONAL MARINE SANCTUARIES





CORDELL BANK
NATIONAL MARINE SANCTUARY
DRAFT MANAGEMENT PLAN

Updated April 2014



The Cordell Bank National Marine Sanctuary (CBNMS) Management Plan has been updated in response to the proposed sanctuary expansion. A sanctuary management review is conducted at a sanctuary periodically, in accordance with the National Marine Sanctuaries Act (NMSA; 16 U.S.C. 1431 et seq.). The draft updated plan applies to the entire area encompassed by the existing sanctuary and the proposed expansion area. The issue areas and programs addressed in this document were built with guidance from the general public, sanctuary staff, agency representatives, experts in the field and the sanctuary advisory council.

For readers who would like to learn more about the management plan, CBNMS policies and community-based management processes, we encourage you to visit our website at www.cordellbank.noaa.gov. Readers who do not have Internet access may call the Sanctuary office at (415) 663-0314 to request relevant documents or further information.

The National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS) seeks to increase public awareness of America's ocean and Great Lakes treasures by conducting scientific research, monitoring, exploration and educational programs. Today, the program manages thirteen national marine sanctuaries and one marine national monument that together encompass more than 170,000 square miles of America's ocean and Great Lakes natural and cultural resources.

The NOAA Ocean Service is the umbrella organization for ONMS and is dedicated to exploring, understanding, conserving and restoring the nation's coasts and oceans and works to balance environmental protection with economic prosperity in its mission promoting safe navigation, supporting coastal communities, sustaining coastal habitats and mitigating coastal hazards.

NOAA, an agency of the U.S. Department of Commerce, is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and providing environmental stewardship of our nation's coastal and marine resources.

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PROPOSED NEW BOUNDARIES FOR CORDELL BANK NATIONAL MARINE SANCTUARY

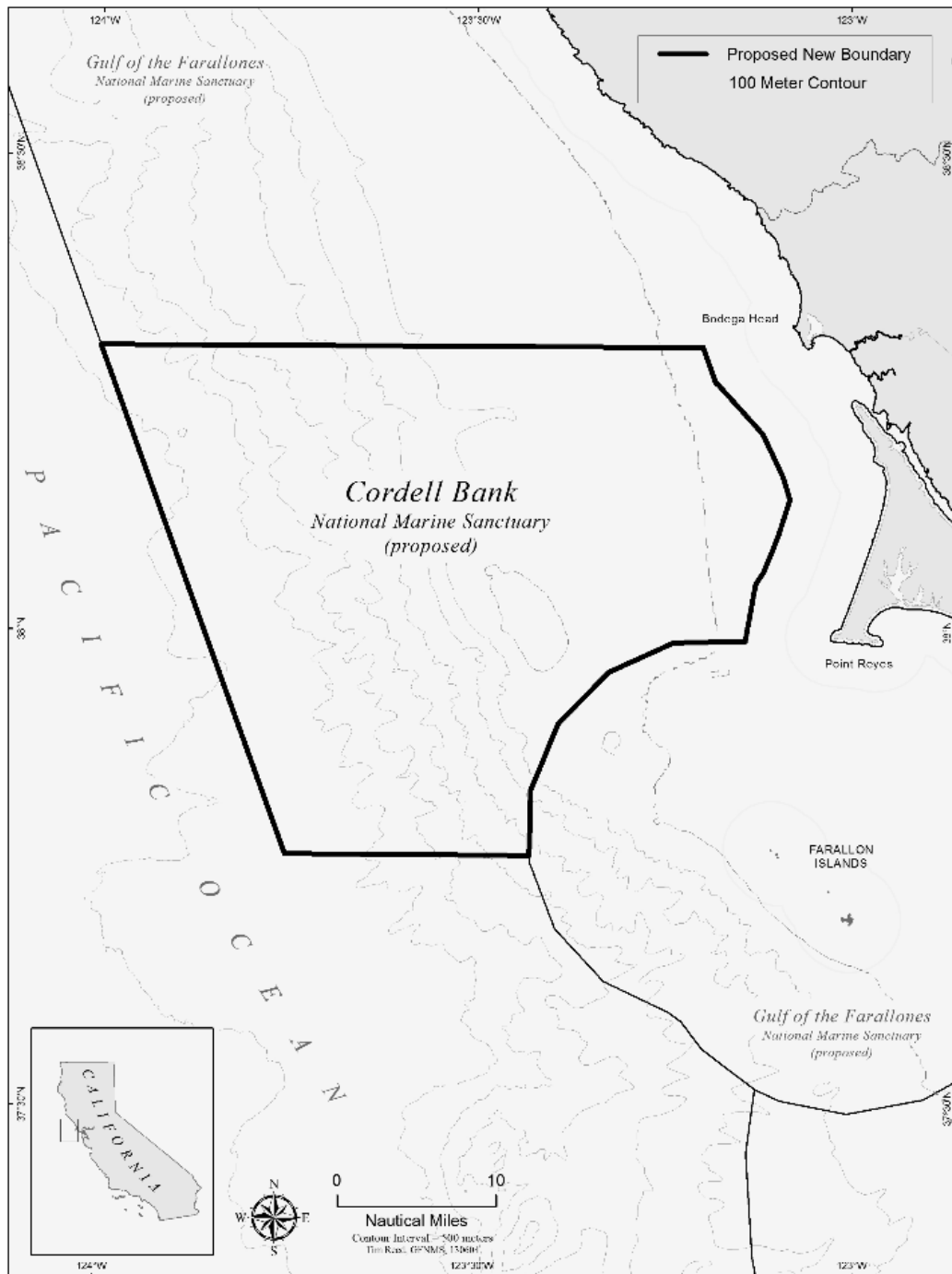


TABLE OF CONTENTS

<i>Cordell Bank National Marine Sanctuary Map</i>	<i>i</i>
<i>Executive Summary</i>	<i>iv</i>
<i>Introduction.....</i>	<i>1</i>
<i>Sanctuary Setting</i>	<i>8</i>
<i>Site-Specific Action Plans.....</i>	<i>17</i>
Structure of Action Plans	19
Education and Outreach Action Plan	26
Performance Measures	35
Resource Protection Action Plan	39
Performance Measures	49
Partnerships with Community Groups Action Plan	53
Performance Measures	57
Conservation Science Action Plan	59
Performance Measures	67
Administration Action Plan	71
Proposed Staffing Plan.....	75
<i>Cross-Cutting Action Plans</i>	<i>79</i>
Cross-Cutting Introduction	81
Administration and Operations Cross-Cutting Action Plan	83
Community Outreach Cross-Cutting Action Plan	89
Ecosystem Monitoring Cross-Cutting Action Plan.....	95
Maritime Heritage Cross-Cutting Action Plan	103
<i>Appendices</i>	<i>113</i>
Appendix I: Jurisdictional Authorities	115
Appendix II: Glossary of Terms	119
Appendix III: Acronyms	123
Appendix IV: National Marine Sanctuaries Act.....	127
Appendix V: Species List.....	153

EXECUTIVE SUMMARY

Current Status

This document is a draft update to the management plan for Cordell Bank National Marine Sanctuary (CBNMS). The National Oceanic and Atmospheric Administration (NOAA) prepared the management plan in cooperation with sanctuary staff, the public, state and federal agencies, stakeholders, and the Cordell Bank National Marine Sanctuary Advisory Council. The last version of the management plan was published in 2008, and has been updated in response to the proposed sanctuary expansion of CBNMS. The entire management plan has not been rewritten; the plan will be reviewed five years after the expansion is effective (if applicable).

CBNMS Designation

CBNMS has been vested with the authority, in accordance with the National Marine Sanctuaries Act (NMSA) to provide comprehensive and coordinated conservation and management of the marine resources on the continental shelf and slope, from about 7 to 51 miles (6 to 44 nautical miles) west of Bodega Head, California and about 52 miles (45 nautical miles) west-northwest of San Francisco. The total area of the sanctuary is 1286 square miles. This is an area of special significance due to unique geology and oceanic features that create conditions that support an extraordinarily diverse and abundant marine community, and thus was designated a national marine sanctuary in 1989. Cordell Bank is an offshore granite bank approximately 4.5 miles wide by 9.5 miles long (3.9 nautical miles wide by 8.3 nautical miles long). The rocky bank emerges from the soft sediments of the continental shelf, with the upper pinnacles reaching within 115 feet of the ocean's surface. Shelf depths at the base of the Bank range from 300 to 400 feet deep. Another significant feature of the sanctuary is Bodega Canyon, which is north of the Bank. The Canyon is about 12.4 miles (10.8 nautical miles) long and is over 5,000 feet deep.

History of Management Plans for CBNMS

The specific requirements of the CBNMS 1989 management plan were compatible with the overall sanctuary management concept embodied in the NMSA and its implementing regulations (15 CFR, Part 922), which require that a management plan be prepared for each national marine sanctuary. This original management plan, developed at the time of designation of the sanctuary in 1989, provided guidelines to ensure that all management actions undertaken in the first five years of designation were directed to resolving important issues as a means of meeting CBNMS objectives. Management objectives were considered in three areas: resource protection, interpretation, and research. The management plan also called for promulgation of five regulations or prohibitions.

The 1992 amendments to the NMSA required that each of the national marine sanctuaries engage in a management plan review process periodically to reevaluate site-specific goals and objectives, management techniques, and strategies. The Office of National Marine Sanctuaries (ONMS) reviewed the management plans of Cordell Bank, Gulf of the Farallones, and Monterey

Bay national marine sanctuaries (CBNMS, GFNMS and MBNMS) jointly, and published management plans for each site in 2008. These sanctuaries are located adjacent to one another, are both managed by ONMS), and share many of the same resources and issues. In addition, all three sites share some overlapping interest and user groups. It was cost effective for the ONMS to review the three sites jointly, rather than conducting three independent reviews.

The management plan review process provided CBNMS with the opportunity to: take a closer look at environmental changes; better understand the cause and effect relationship of human activity and natural perturbations on the marine resources; and engage the public in the management decision making process. As a result of this process, CBNMS reshaped how it manages sanctuary resources, from restructuring its program areas to updating its regulations.

The boundary expansion for CBNMS was both envisioned in an action plan strategy in the 2008 management plan (strategy AD-11 in that plan), and was also proposed legislatively for eight years by Representative Lynn Woolsey and Senator Barbara Boxer. As part of its efforts to evaluate the resource protection and other benefits from such a boundary expansion, NOAA has produced an updated management plan built upon the 2008 CBNMS final management plan. Not all action plan strategies have been updated; many actions are ongoing, and some have been revised. The overall action plans and ONMS requirements will apply to the expanded CBNMS, if applicable.

Five action plans specific to CBNMS are contained in the management plan:

1. Education and Outreach
2. Resource Protection
3. Partnerships with Community Groups
4. Conservation Science
5. Administration

Updates to the 2008 management plan include: revisions to the description and map of CBNMS; technical corrections, including removal of obsolete text and completed actions and additions relevant to the expanded sanctuary area; renaming the Ecosystem Protection Action Plan the Resource Protection Plan; moving the enforcement, emergency response and regulations and permitting activities from the Administration Action Plan to the Resource Protection Plan; adding an activity regarding ship strikes of whales to the Resource Protection Plan; adding an activity to encourage and assist local and regional entities in improving the availability and use of pump-out facilities and dump stations for vessels; adding an activity to evaluate specific previously proposed research activities to the Conservation Science Plan; summarizing key partners at the action plan and cross-cutting action plan level rather than at the strategy level; deletion of specific products; revision of action plan former timelines and budgets into a summary implementation table in the Administration Action Plan; and updates to the species list appendix.

INTRODUCTION

OVERVIEW

Background about the Sanctuary

Cordell Bank National Marine Sanctuary (CBNMS) has been vested with the authority, in accordance with the National Marine Sanctuaries Act (NMSA), to provide comprehensive and coordinated conservation and management of the marine resources surrounding Cordell Bank off the north-central coast of California. CBNMS is characterized by a combination of undersea topography and oceanic conditions that provide for a highly productive environment in a discrete, well-defined area. The Bank consists of a series of steep-sided ridges and narrow pinnacles resting on a plateau 300 to 400 feet deep. The shallowest depth on Cordell Bank is 115 feet below the sea surface, yet only a few miles to the west there are water depths of 6,000 feet. Another important feature of CBNMS is Bodega Canyon, which is north of the Bank. The Canyon is about 12.4 miles (10.8 nautical miles) long and over 5,200 feet deep. CBNMS protects an area of 1286 square miles (mi²) (971 square nautical miles).

Point Arena is one of the major upwelling centers along the west coast of the United States. Prevailing currents push nutrients from upwelling southward along the coast, moving nutrients and other prey over the upper levels of the Bank. These highly productive waters sustain a vigorous biological community that includes various algae and numerous invertebrates, fishes, marine mammals, sea turtles and seabirds. The combination of sedentary plants and animals typical of nearshore waters in close proximity to open ocean species like blue whales and albatross creates a rare mix of species and a unique biological community at Cordell Bank. Bodega Canyon is a prominent submarine feature in close proximity to Cordell Bank. This seafloor feature cuts across the continental shelf and slope about 10 miles (8.5 nautical miles) north of Cordell Bank. Submarine canyons provide areas of high bathymetric complexity, support deep water communities, and affect local and regional circulation patterns. Bodega Canyon provides habitat for adult stages of groundfish including rockfish and flatfish that rear in nearshore waters and move offshore in their adult stages. Limited work in Bodega Canyon revealed mud draped hard bottom on the canyon edges with deep corals and fishes associated with the hard substrate (CBNMS unpublished report). In addition, offshore canyons and other bathymetric features are important foraging areas for seabirds and marine mammals (Yen et al. 2004¹).

The eastern edge of the sanctuary is located about 7 miles (6 nautical miles) from shore at Point Reyes and is separated from the coast of Marin and Sonoma counties by Gulf of the Farallones National Marine Sanctuary (GFNMS). The coastal areas of west Marin and Sonoma counties are sparsely populated, with ranching, dairy farms, agriculture, and public open space maintaining

¹ Yen, P.W., W.J. Sydeman, and K.D. Hyrenbach. 2004. Marine bird and cetacean associations with bathymetric habitats and shallow-water topographies: implications for trophic transfer and conservation. *Journal of Marine Systems* 50 pp. 79 – 99.

Introduction

CBNMS Draft Management Plan

the rural character. Bodega Bay is a fishing port that harbors the closest marinas to the sanctuary. The harbor also serves as the departure point for charter vessels that provide recreational fishing and wildlife viewing opportunities in the sanctuary, although access to the sanctuary is often limited by unfavorable sea conditions.

History of CBNMS

In July 1981, the National Oceanic and Atmospheric Administration (NOAA) received a recommendation to establish Cordell Bank as a National Marine Sanctuary from Cordell Expeditions, a non-profit organization dedicated to the exploration and description of the Bank. NOAA evaluated the recommendation in accordance with the requirements of the National Marine Sanctuary Program (now Office of National Marine Sanctuaries or ONMS) regulations (15 CFR 922). Cordell Bank was found eligible for inclusion on the List of Recommended Areas (LRA) and was placed on the LRA in 1981. More complete information on the site was collected by NOAA and incorporated into a resource summary and site description that was distributed to the public and agencies for comment in 1982. It was determined that Cordell Bank was an area of special significance that was not adequately protected. The final rule went into place in 1989, and Cordell Bank was designated a national marine sanctuary. The proposal to expand CBNMS was initiated with a notice in the *Federal Register* on December 21, 2012. The boundary expansion for CBNMS was both envisioned in an action plan strategy in the 2008 management plan (strategy AD-11 in that plan), and was also proposed legislatively for eight years by Representative Lynn Woolsey and Senator Barbara Boxer. The proposed expansion would protect a total of 1286 mi² (971 square nautical miles) which is an increase of 757 mi² to the existing sanctuary (572 square nautical miles).

The operation and management of CBNMS was originally combined with that of the adjacent GFNMS, then known as the Point-Reyes Farallon Islands National Marine Sanctuary. Under this approach, the management of the research, education, and resource protection programs was a collateral function of the GFNMS manager. In 1998, a separate budget was allocated to manage CBNMS independently of GFNMS and over the next few years additional staff members were hired along with a sanctuary superintendent in 2003.

The original management plan, developed at the time of designation of the sanctuary, provided guidelines to ensure that all management actions undertaken in the first five years of designation were directed to resolving important issues as a means of meeting sanctuary objectives. Management objectives were considered in three areas: resource protection, interpretation, and research. The management plan also called for promulgation of five regulations or prohibitions.

THE CBNMS MANAGEMENT PLAN

The overall management of CBNMS is carried out through two complementary elements: regulatory and non-regulatory. The regulatory component includes both site-specific regulations or prohibitions and general regulations that apply to all thirteen national marine sanctuaries. Regulations are used to control or restrict human behavior that is not compatible with resource protection. The non-regulatory component is largely described in the management plan and

includes CBNMS's three program areas: Education and Outreach; Conservation Science; and Resource Protection. These three program areas are supported by an administrative framework that ensures all resource management activities are coordinated and provides an appropriate infrastructure to help meet the goals and objectives set forth by this management plan. Collectively, the above-mentioned parts make up the whole of the management plan and all the parts are important tools for effective resource management.

The management plan is structured to address the priority resource management issue areas identified during the Joint Management Plan Review (JMPR), which include the three program areas mentioned above as well as partnerships with community groups and administration.

The spatial context for addressing these issues is not limited by the geographically drawn, and often politically driven, boundaries of just a single sanctuary, but is across CBNMS, GFNMS, and Monterey Bay National Marine Sanctuary (MBNMS) as well as areas outside these sanctuaries. For that reason, the cross-cutting action plans were developed as a result of the JMPR. The goals of these cross-cutting action plans are to build upon existing coordination efforts and identify activities that should be jointly implemented so that these three sanctuaries can operate as integrated and complementary sites to better protect the sanctuary resources. This ensures scarce program resources are used more efficiently and that the result is more consistent and coordinated delivery of programs, products and services to the public. The priority cross-cutting action plans include: Administration and Operations Community Outreach; Ecosystem Monitoring; and Maritime Heritage.

Management Plan Reviews

The 1992 congressional legislation that reauthorized the NMSA required that each of the national marine sanctuaries engage in a management plan review process to reevaluate site-specific goals and objectives, management techniques, and strategies. The periodic management plan review process allows national marine sanctuaries the opportunity to: take a closer look at how the environment has changed; better understand the cause and effect relationship of human activity and natural perturbations on the marine resources; and engage the public in the management decision making process. As a result of the JMPR, in 2008 CBNMS reshaped how it manages the marine resources by restructuring its program areas and regulations. Management issues are complicated by many factors including: incomplete ecosystem-based scientific knowledge on which to base decisions; the diversity of uses and interests that need to be considered; the environmental, social, economic, and cultural value of the resources; and the complexity and diversity of the marine resources themselves.

The management plans of CBNMS, GFNMS, and MBNMS were jointly reviewed as part of the JMPR, and were published in 2008 with the Final Environmental Impact Statement (FEIS) for each sanctuary. These sanctuaries are located adjacent to one another, are managed by the same NOAA office, and share many of the same resources and issues. In addition, all three sites share some overlapping interest and user groups. During the review, the sanctuaries evaluated management and operational strategies, regulations, and boundaries. The review process (described at http://sanctuaries.noaa.gov/jointplan/jmpr_faq.html) provided an opportunity to

Introduction

CBNMS Draft Management Plan

better coordinate programs among the three sanctuaries, and included public and Sanctuary Advisory Council reviews and issue prioritization.

This document is an updated management plan, developed in response to the proposed sanctuary expansion. A Draft Environmental Impact Statement (DEIS) for the proposed expansion is being released for public review with the draft revised management plan. The comments will be considered by NOAA, and, if warranted, a final management plan/final EIS (FEIS) will be released to the public and submitted to Congress and the governor for review. If the expansion proposal process results in sanctuary expansion, following a 45-day review period and completion of any necessary changes, the final management plan and accompanying regulations will become effective.

The Value in Building Community Partnerships

The Sanctuary Advisory Council for CBNMS includes two agency and seven stakeholder representatives, with an alternate for each seat. The Sanctuary Advisory Council provides advice to sanctuary management and serves as a liaison to the community. Sanctuary Advisory Council meetings provide a platform for public input on the management of the marine resources of CBNMS. This partnership has allowed CBNMS to make use of and build on the knowledge, roles, and resources that the private sector and other agencies have to offer. The Sanctuary Advisory Council has also been a vehicle for drawing in public support, making progress through cooperation, and including the community in the decision-making process.

BUILDING A MANAGEMENT PLAN

Vision Statement

The vision, goals, and objectives that follow are based on those in the original management plan. At the commencement of the Jmpr process, CBNMS staff worked together to build a vision for the future of the site that reflects the sanctuary framework and needs. That vision, with small wording changes, still applies today:

CBNMS is characterized by a combination of oceanic conditions and undersea topography that supports rich and diverse marine communities. Two worlds come together at this offshore site: open ocean species thrive in close proximity to a benthic reef community.

CBNMS's highest priority is resource protection. CBNMS takes a leading role in ecosystem management, focusing on biological and physical processes. Together, with our partners, we work to protect biological communities and their habitats. By addressing current management issues and anticipating future challenges to CBNMS, we strive to maintain a healthy marine environment now and for future generations.

CBNMS Goals and Objectives

In order to be consistent with the guiding legislation established in the NMSA, the overriding mandate for the thirteen national marine sanctuaries, CBNMS has the following priority goals:

Improve the conservation, understanding, management, and sustainable use of marine resources;

Enhance public awareness, understanding, and appreciation of the marine environment;

Maintain for future generations the habitat and ecological integrity of the natural assemblage of living resources that inhabit these areas;

Maintain the natural biological communities, protecting and (where appropriate) restoring and enhancing natural habitats, populations, and ecological processes;

Provide authority for comprehensive and coordinated conservation and management of these marine areas and activities affecting them, in a manner that complements existing regulatory authorities;

Create models of, and incentives for, ways to conserve and manage these areas, including the application of innovative management techniques; and

Cooperate with global programs encouraging conservation of marine resources.

The management strategies outlined in the plan for CBNMS aim to meet these goals and objectives. It should be noted that although the goals and objectives are listed discretely, they are overlapping. Collectively, the management strategies developed in the management plan address the full range of goals and objectives set forth in the previous paragraph.

Addressing Goals and Objectives within an Ecosystem Context

These priority goals and objectives lead CBNMS to take an ecosystem-based approach to managing a fluid marine environment with great temporal and spatial complexity and diversity. CBNMS's experience during the management plan review process has shown that the scientific community, resource agencies, and the public recognize the importance of an integrated ecosystem-based approach to protect marine biodiversity and habitats. The ONMS's emphasis on marine ecosystem management is consistent with other state and federal agencies' programs and initiatives.

Tools for Effective Management Planning

CBNMS's management plan was built not only to protect the marine resources and biodiversity, but also to consider maintenance of economic equity, cultural integrity, and human social structures. In order to better evaluate human-use activities, their impacts on the resources, and

Introduction

CBNMS Draft Management Plan

compatibility with resource protection, CBNMS used three strategic tools in the development of the management plan: science, socioeconomics, and local knowledge.

Science

Protection of living and nonliving marine resources is the primary objective of the ONMS, and science serves an important role in understanding, measuring, and predicting change in the status of the marine ecosystem. Scientific inventories, research, and monitoring provide an important information base for resource managers to understand and evaluate the effectiveness of management regimes. NOAA collected data from individual researchers and institutions throughout the region and, where possible, integrated it into a Geographic Information System (GIS) to spatially identify significant living and nonliving marine resources, habitats, and physical and geological features. These data were used to help describe and define the ecosystem, identify areas of special significance, and locate important ecosystem support systems.

Socioeconomics

In California alone, ocean industries such as fishing and shipping account for approximately 2 percent of the gross domestic product, amounting to roughly \$800 billion annually. These numbers paint an important picture about the need to properly manage the marine resources. A sustainable community recognizes both ecosystem sustainability and economic sustainability as mutually beneficial. The ONMS considers not only the potential cost of management restrictions on income generating activities, but also public benefits derived from long-term protection of nationally significant resources.

Local Knowledge

Local knowledge represents the voice of direct experience and interaction with the marine resources over time. The knowledge of locals is more extensive and long range than much of the scientific research available for the study area. CBNMS not only honors and incorporates local knowledge, but also realizes stakeholder groups have a deep and integrated respect for the natural world. These local voices represent local interests, issues, and concerns to be balanced against those from the outside. The advisory council, local mariners, and the public provided valuable input to the development and update of this management plan.

Looking at the Next Five Years and Beyond

Since its establishment in 1972, the ONMS has been building models for better marine resource management. But even today, with better knowledge of the natural world and more experience managing human behavior, the ONMS continues to build new models to enhance resource protection. This is why we call the CBNMS management plan a “living document,” serving as a flexible and responsive framework for managing impacts on natural marine systems.

This “living document” also serves as a proactive tool for planning a sustainable future. To ensure a sustainable future, CBNMS’s “living document” will provide a framework for not only

addressing the resource management issues of the present, but also anticipating those emerging issues of the future.

The emergence of new issues and other unforeseeable factors may affect specific aspects of sanctuary management as described in this plan. However, the overall goals, management objectives, and general guidelines will continue to be relevant. The aim is to carefully adjust the plan to changing circumstances in light of the experience gained in actual management. Modification to the scope and scale of the action plans may have to be made due to unforeseeable changes in levels of funding. Again, the goals and objectives of the plan will remain unchanged.

SANCTUARY SETTING

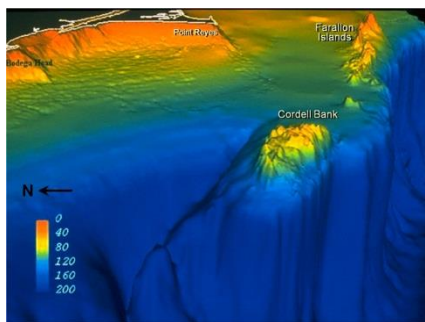
PHYSICAL SETTING

Location

CBNMS protects an area of 1286 mi² (971 square nautical miles) off the north-central California coast. Significant features of the sanctuary include Cordell Bank, an offshore granite bank located on the edge of the continental shelf, about 52 miles (45 nautical miles) west-northwest of San Francisco and 23 miles (20 nautical miles) west of the Point Reyes lighthouse in an open ocean environment, and Bodega Canyon, a prominent seafloor feature that cuts across the continental slope and into the shelf north of Cordell Bank. CBNMS is entirely offshore, in federal waters, and shares its southern, eastern, and northern boundaries with GFNMS. The CBNMS eastern boundary about 7 miles (6 nautical miles) from shore at Bodega Head and the western boundary is on the continental slope about 51 miles (44 nautical miles) west of Bodega Head. CBNMS is located in one of the world's four major coastal upwelling systems. The combination of oceanic conditions and undersea topography provides for a highly productive environment in a discrete, well-defined area. The vertical relief and hard substrate of the Bank provides benthic habitat with nearshore characteristics. Physical and biological processes associated with the Bodega Canyon make this a dynamic oceanographic area.

Geology

Distinctive features that characterize the geology of CBNMS include the shallow granitic Cordell Bank, Bodega Canyon, and the surrounding soft bottom of the continental shelf and slope.



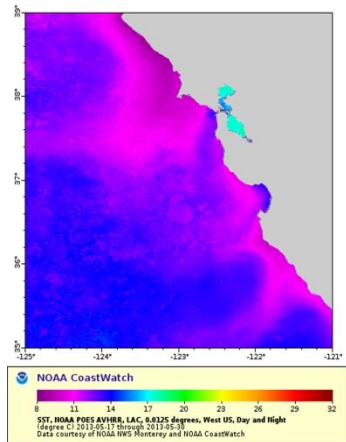
Cordell Bank perches dramatically on the edge of the continental shelf.

Cordell Bank is composed of a granite block that was created as part of the southern Sierra Nevada range some 93 million years ago. The Bank is one of the few offshore areas where the granite block emerges from the newer sediments that make up most of the continental shelf. The Bank itself is about 4.5 miles wide by 9.5 miles long (3.9 nautical miles wide by 8.3 nautical miles long). The Bank meets the continental shelf in water depths between 300 and 400 feet. Jagged ridges and pinnacles rise abruptly from this plain and reach up to 115 feet below the sea surface. In many places, the sides of the ridges and pinnacles are extremely steep, often with slopes greater than 80 degrees (Schmieder 1985²). About 7 miles (6 nautical miles) west of the Bank, the continental slope drops steeply to 6,000 feet and more.

² Schmieder, Robert W. Cordell Bank Expedition Report 1984. Cordell Expeditions, Walnut Creek, CA. November 1985.

Bodega Canyon is a prominent submarine canyon about 10 miles (8.5 nautical miles) north of Cordell Bank. This seafloor feature, which cuts across the continental slope and shelf is about 12.4 miles (10.8 nautical miles) long and over 5200 feet deep. The canyon walls are a combination of mud draped rock and soft sediments. The continental shelf and slope within the sanctuary support a thriving soft bottom community. Dense aggregations of sea whips and brittle stars are abundant in some areas. Sea whip aggregations provide structure and habitat for a number of other invertebrates and fishes. Dungeness crab are residents of the soft bottom shelf environment. The infaunal community in the soft bottom is not well studied but mounds and bioturbated substrate are indications that there is a complex infaunal community. Deposits of undifferentiated mud and sand extend in a plume to the south and a fan to the east of Cordell Bank.

Climate and Oceanography



Satellite image of the temperature of the ocean surface from the spring of 2013. Photo: NOAA

The calendar year at Cordell Bank can be broken into three oceanographic seasons: upwelling season, relaxation season, and winter storm season. The upwelling season typically begins with the spring transition, characterized by strong persistent winds from the northwest. This usually occurs sometime in late February or early March, and is the start of the annual productivity cycle along northern and central California. During this season, upwelling driven by winds from the northwest alternate with periods of calm. These winds generally begin to subside by late July. August through mid-November is the relaxation season. During this time, winds are mostly light and variable, and the seas can be calm for a week or two at a time. This changes abruptly with the arrival of the first winter storms from the Gulf of Alaska. From late November through early February, winter storms create large waves and strong winds along the coast. Ocean conditions can be treacherous all year, but especially during winter storms.

BIOLOGICAL SETTING/ LIVING MARINE RESOURCES

Marine Birds

The waters around Cordell Bank and Bodega Canyon provide critical foraging habitat for many species of seabirds. Seabird densities in this area can be among the highest of any area in central and northern California. Seventy-one seabird species have been identified feeding in or near the sanctuary. The composition of seabirds found is a mix of local breeding birds and highly migratory, open-ocean species. While the local residents use the nearby Farallon Islands and Point Reyes areas to nest, some



Black-footed Albatross feed in the productive waters of CBNMS. Photo: Rich Stallcup

Sanctuary Setting

CBNMS Draft Management Plan

migrants nest thousands of miles away. A study using radio tags documented that Black-footed Albatross nesting in the northwest Hawaiian Islands were “commuting” to these waters to forage before returning to feed chicks on their nests on Midway Atoll.

Other migratory species use these productive waters as a stopover on their annual migration route. Tens of thousands of Sooty Shearwaters can be seen on days when they are migrating through the sanctuary. Sanctuary waters are equally important to local breeders. Most of the world’s small population of Ashy Storm-petrels, which nest on Southeast Farallon Island, can be seen on the water near the Bank. More than 20,000 Cassin’s Auklets have been counted in a single day.

Some common sanctuary species include the Black-footed Albatross, Northern Fulmar, Sooty Shearwater, storm-petrels, Cassin’s Auklet, Rhinoceros Auklet, phalaropes, and many species of gulls.



Gulls, albatross, and many other marine birds inhabit the surface of CBNMS in search of food. Photo: Rich Stallcup

Marine Mammals

Eighteen species of marine mammals (a combination of resident and migratory species) have been observed within the sanctuary. Gray whales, for example, pass through the sanctuary on their annual migrations between Arctic feeding grounds and Mexican breeding areas.

Dall’s porpoise is one of the most frequently sighted marine mammals in the sanctuary, along with humpback and blue whales. Individuals of all species use the sanctuary as a



Dall’s porpoises feed on fish species in CBNMS. Photo: Peter Pyle



Humpback whales congregate in the waters of CBNMS for the krill found there in abundance. Photo: Tom Kieckhefer

destination feeding ground. Large numbers of the eastern Pacific humpback whales and blue whales feed during the summer months in the CBNMS area.

The harbor porpoise, a species widely distributed in coastal waters but rarely seen offshore, is regularly observed within the sanctuary’s shallow areas. Pacific white-sided dolphins and northern right whale dolphins are abundant. Other cetaceans observed in the sanctuary include Risso’s dolphins and killer whales.

The California sea lion, the most abundant pinniped in California waters, has been observed in CBNMS more frequently and in greater numbers than other pinnipeds. The northern fur seal is also abundant in the area in late fall and winter (most of them use summer breeding grounds in the Channel Islands). Steller sea lions (*Eumetopias jubatus*) decreased drastically in California between 1950-1980s, but the breeding populations at Año Nuevo Island and the Farallon Islands have been stabilizing for the past ten years (Pitcher et al. 2007³); areas around Cordell Bank and other offshore features remain a feeding area for this species, possibly because of the abundance of rockfish and other fishes. Nearby rookeries include Año Nuevo Islands and the Farallon Islands. The sea lions' winter haul-out grounds include Point Reyes and offshore rocks along the Sonoma County coast.



California sea lions are the most common pinniped found in CBNMS. Photo: NOAA

Fish Resources

There have been 183 species of fish identified in CBNMS. Many species of rockfish (*Sebastes* spp.) can be found at all depths and habitats within the sanctuary. The Bank provides critical habitat for young of the year, juvenile, and adult rockfishes. Lingcod are especially conspicuous in the wintertime, when they move up onto the Bank to spawn. Many species of flatfish use the soft-bottom shelf and slope habitats, and Albacore Tuna and Salmon frequent the sanctuary on a seasonal basis.



*Rockfish (*Sebastes* spp.) occupy many niches in the Bank ecosystem. Photo: Tony Chess*

Benthic Organisms

An abundant cover of benthic organisms can be seen on the upper rock surfaces of Cordell Bank. The constant food supply washing the Bank combined with a hard substrate for attachment



Encrusting life of all colors cover the bank pinnacles. Photo: Cordell Expeditions

provide ideal conditions that support a rich assemblage of benthic invertebrates. The high light penetration allows for algal photosynthesis far deeper than in nearshore coastal waters. These conditions support benthic algae more commonly associated with shallow nearshore habitats. Space is the limiting factor on the upper pinnacles and ridges of Cordell Bank. Ridges are thickly covered with sponges, anemones, hydrocorals, gorgonian corals, hydroids, tunicates, and scattered crabs, holothurians, and gastropods. In some places, the cover is up to one foot

³ Pitcher, K.W., P.F. Olesiuk, R.F. Brown, M.S. Lowry, S.J. Jefferies, J.L. Sease, W.L. Perryman, C.E. Stinchcomb, and L.F. Lowry. 2007. Abundance and distribution of the eastern North Pacific Steller sea lion (*Eumetopias jubatus*) population. Fisheries Bulletin 107: 102-115.

thick and very brightly colored, mainly in white, pink, yellow, and red. The brilliant reds produced by the fluorescent strawberry anemones are especially striking.

Exposed rock substrate in Bodega Canyon provides habitat for corals, sponges and an assortment of other benthic organisms. Much of the hard substrate investigated was draped with a layer of mud so that invertebrate cover on the canyon edge was sparse (Fruh et al. 2013⁴).

Soft sediment areas of the continental shelf and slope provide habitat for a diverse array of benthic organisms. Some areas on the shelf have dense aggregations of sea whips and brittle stars with sea pens, sea stars, and anemones also present. Dungeness crab are common residents of soft bottom shelf habitat.

At least 618 species of invertebrates and 32 species of algae have been identified in CBNMS.

HUMAN-USE ACTIVITIES

Regional Context

The eastern edge of the sanctuary is located seven miles (six nautical miles) from shore and is separated from the coast of Marin and Sonoma Counties by GFNMS. As an offshore sanctuary, human activities within the sanctuary are limited due to its remote nature. The primary activities include commercial shipping (the northern shipping lane of San Francisco Bay passes through the sanctuary), commercial and recreational fishing, wildlife viewing, research, and education. The coastal areas of west Marin and Sonoma counties are sparsely populated, with ranching, dairy, agriculture, and public open space maintaining a rural character. Most of the people in Marin and Sonoma live about an hour inland from the coast. Bodega Bay is an active fishing port that has the closest marinas to the sanctuary. This harbor also serves as the departure point for charter vessels that provide recreational fishing and wildlife viewing opportunities in the sanctuary.

To the southeast of the sanctuary is the major San Francisco metropolitan area, with a population of about eight million people. The City and County of San Francisco functions as the administrative center of the Bay Area, providing a focal point for many financial, transportation, manufacturing, and government establishments, as well as a source of jobs for area residents.

Commercial Shipping

Vessel traffic entering or leaving San Francisco Bay via the northern traffic lane, which was extended in June 2013, passes through most of the sanctuary within the lane. In 2012, 1,775 commercial vessels reported using the northbound shipping lanes. Of these, 687 were inbound and 1088 were outbound. San Francisco is a staging port for cruise ships traveling north through

⁴ Fruh, E., M.E. Clarke, and C. Whitmire. 2013. A characterization of the deep-sea coral and sponge community in bodega canyon off the coast of California from a survey using an autonomous underwater vehicle. Report to NOAA Deep Sea Coral Research and Technology Program.

CBNMS to Alaska and, to a lesser degree, for cruise ships going south to Monterey or other locations. Cruise ship calls to San Francisco Bay in 2012 included 80 separate visits with 200,000 passengers.

Fishing Activities

The Cordell Bank area has supported an active commercial and recreational fishery.

Commercial and recreational activity is regulated by the Pacific Fishery Management Council (PFMC), working with the National Marine Fisheries Service (NMFS), and the California Department of Fish and Wildlife (CDFW). Commercial fisheries have generally targeted groundfish (includes rockfish, flatfish, Lingcod, Black Cod, Pacific Whiting and other species) Salmon, crab and Albacore Tuna. Recreational fisheries have generally focused on rockfish, Lingcod, Salmon, and Albacore Tuna and crab. Most of the private boats and charter vessels that fish in the sanctuary are from Bodega Bay. Recreational fishing is strongly influenced by the weather. Strong winds and rough ocean conditions often prevent smaller boats from venturing out to the



Commercial and recreational fishing target rockfish, Salmon, and pelagic species. Photo: NOAA

sanctuary.

Wildlife Viewing

Wildlife viewing is an increasingly popular activity in the sanctuary. The birding community has traveled to Cordell Bank and Bodega Canyon for many years to observe species of open ocean seabirds. More species of albatross have been seen in this region than anywhere else in the northern hemisphere.

Because of the abundance of food, this area is a destination feeding ground for leatherback sea turtles, seabirds, humpback and blue whales. Beginning in early summer and continuing through fall, feeding turtles, seabirds, humpback and blue whales frequent sanctuary waters. This coincides with the calmest weather of the year, and many charter vessels from Bodega Bay and San Francisco make regular whale-watching trips to the sanctuary at this time.



Wildlife viewing is the best way for people to experience the rich environment of Cordell Bank. Photo: NOAA

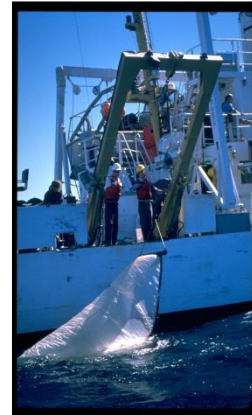
Education

One of the CBNMS goals is to promote appreciation, public awareness, and understanding for the marine resources. The CBNMS education program sponsors a yearly lecture series; participates in many outreach events; hosts a monthly radio show; delivers programs at local schools; and trains teachers to educate about the sanctuary and the ecosystem it protects. Other

opportunities for the public to learn about the sanctuary include: museum exhibits, interpretive displays, brochures, websites, and field ecology outings.

Research

The first research effort in this area occurred in 1869 when Edward Cordell mapped the Bank. Early research was confined to geographic surveys and rock sampling. In the 1970s and 80s, Cordell Expeditions, a non-profit organization, initiated a process of exploration to describe the Bank. Today, the majority of research and monitoring in the sanctuary is conducted by CBNMS or in partnership with universities, other state and federal agencies and non-profit organizations. Every year, the National Marine Fisheries Service assesses juvenile rockfish recruitment and regularly conducts population surveys for adult fishes. CBNMS has been monitoring ocean conditions since 1997. These programs have included the investigation of oceanographic conditions and how they relate to the distribution and abundance of krill, seabirds, and whales. From 2001 to 2005, CBNMS staff and partners characterized benthic habitats on Cordell Bank and monitored fishes and invertebrates on and around the Bank. In 2010 and 2011, CBNMS worked with partners using remotely operated vehicles and autonomous underwater vehicles to characterize habitats and deep coral/sponge communities on the continental slope and in and around Bodega Canyon.



*Research in CBNMS
answers important
questions about the
ecosystem the sanctuary*

JURISDICTIONAL SETTING

Although the CBNMS staff does coordinate with state agencies such as CDFW and the California Coastal Commission, CBNMS lies entirely in federal waters. Federal jurisdictional partners include:

United States Coast Guard (USCG) holds broad responsibility for enforcing all federal laws throughout the sanctuary and assists NOAA in the enforcement of sanctuary regulations, among other duties. USCG provides on-scene coordination with Regional Response Center facilities under the National Contingency Plan for removal of oil and hazardous substances in the event of a spill that threatens sanctuary resources.

NMFS has responsibility along with the CDFW, under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), for approving, implementing and enforcing Fishery Management Plans prepared by regional fishery management councils to ensure sustainability of fishery resources. NMFS also shares responsibility with the United States Fish and Wildlife Service (USFWS) for the implementation of the MMPA and the ESA to prevent takings of any species protected under these laws. In addition, NOAA's Office of Law Enforcement (OLE) has responsibility for enforcing the NMSA.

United States Environmental Protection Agency (USEPA) has regulatory responsibilities with regard to sewage outfalls (under the Clean Water Act) via National Pollutant Discharge Elimination System (NPDES) Permits, and ocean dumping (under Title I of the Marine Protection, Research, and Sanctuaries Act) to protect water quality.

USFWS is responsible for protecting all marine mammal species other than whales, porpoises, and pinnipeds under the MMPA and for protecting endangered or threatened bird and other species under the ESA.



SITE-SPECIFIC ACTION PLANS

CBNMS DRAFT MANAGEMENT PLAN

- I. Structure of Action Plans**
- II. Education and Outreach**
- III. Resource Protection**
- IV. Partnerships with Community Groups**
- V. Conservation Science**
- VI. Administration**

STRUCTURE OF ACTION PLANS

This management plan includes a set of functionally based action plans that outline how the sanctuary will be managed for the next five to ten years. Each action plan outlines how different strategies will be conducted and proposes performance indicators as a measure of management effectiveness.

DEVELOPMENT OF ACTION PLANS

Through the management plan review and scoping for the proposed expansion, resource management issues to be addressed in the management plan were identified. The following issues and program areas are addressed in this management plan:

- A. Education and Outreach
- B. Resource Protection
- C. Partnerships with Community Groups
- D. Conservation Science
- E. Administration

OUTLINE OF ACTION PLANS

Each action plan is divided into seven sections, which are described in detail below.

Issue Statement/Program Statement

The issue (or program) statement provides an introduction about “why” this is a priority issue to be addressed by sanctuary management in the management plan. It may include a brief description of the current situation or problem, and specific areas, which need attention.

Issue Description/Program Description

The issue (or program) description provides a general background on what the CBNMS staff currently knows or understands about an issue. Program descriptions explicitly describe the types of activities already undertaken by the CBNMS staff and the general direction it would like to move in the future. It includes the status of natural resources, related human-use activities occurring in the sanctuary, and jurisdictional authorities pertinent to the specific issue.

Goals

The goal states the desired future state of the CBNMS ecosystem and management actions relevant to the specific resource management issue or program area. The goal is a broad statement about a long-term desired outcome that may or may not be completely obtainable.

Objectives

The objectives are measurable outcomes for evaluating progress and success in moving toward the future desired condition.

Strategies

This section describes how the objectives will be accomplished for the particular issue or program area. Each strategy addresses one or more objectives and is divided into specific activities for the CBNMS staff to carry out. Activities are developed and implemented to achieve the goals and objectives of the issue or program area.

Many activities within this plan complement each other by providing the groundwork for other activities to take place or by being similar such that efficiencies can be achieved by working on them together.

Performance Measures

Each action plan includes a chart presenting the outcomes expected and the performance indicators that will be used to measure progress toward the outcome. This effort is being undertaken to measure CBNMS management effectiveness (i.e. the achievement of a planned effort or activity). The methodology to be used to assess the effectiveness of each strategy in achieving the desired goal is detailed in this chart. The definitions for the performance measure terminology follow.

<i>Strategy</i>	The management action taken by the CBNMS staff to address a particular issue.
<i>Performance Goal</i>	The overarching, very broad target for the action plan. The goal(s) under each issue area or program area action plan.
<i>Desired Outcome (Objective)</i>	The more specific outcomes we want to achieve with our activities within the scope of the performance goal. The objectives under each issue area or program area action plan.
<i>Outcome Measure</i>	A specific amount or degree of the indicator that shows progress towards the desired outcome. Could contain temporal (by year) and range targets (percent, fraction, etc.).
<i>How Measured</i>	Describes exactly how the outcome measure will be measured.
<i>Who Measures</i>	The staff or outside partner who will measure the outcome.
<i>Output Measure</i>	A specific product or tool that results from the activity. Its production demonstrates a completed objective.

Key Partners

Key partners are organizations that the sanctuary managers believe have common interests with CBNMS on a particular activity. This list does not limit the partners CBNMS may work with,

but merely serves as a guide when implementing the activity. The sanctuary staff may partner with other organizations as work on a particular activity or strategy progresses. Likewise, the products listed are projected, but additional or altered products may become more appropriate as the strategy is completed.

IMPLEMENTATION OF THE MANAGEMENT PLAN

This plan is designed to guide management of the marine resources of CBNMS for the next five to ten years. Implementation of this new management plan will require cooperation and coordination among many federal, state, and local government agencies, as well as private organizations and individuals. Information exchange, sharing facilities and staff, and the coordination of policies and procedures within an ecosystem context are features of this management plan and each of its program areas.

Limitations

Although this management plan for CBNMS details the action plans for the three program areas, an action plan for community outreach, and an action plan for administration, how the strategies within the action plans are implemented may be affected by multiple factors. These factors include: (1) funding that comes primarily from congressional appropriations that may fluctuate from year to year; (2) CBNMS's ability to forge new partnerships in which staff, facilities and financial resources may be shared; (3) CBNMS's need to be responsive to the ever changing impacts on the sanctuary's marine resources from both natural perturbations and human activities; (4) an increased understanding of the complexity of the ecosystem, habitats, and living marine resources; and (5) learning better ways to manage the resources through experience, experimentation, and the sharing of knowledge. Sanctuary staff, the advisory council, the public, and CBNMS's partners will, as appropriate, provide oversight and guidance for redirecting any management plan strategies.

Implementation of CBNMS Action Plans

Each of CBNMS's program areas—Education and Outreach; Conservation Science; and Resource Protection—has an associated action plan for implementing the management plan. These action plans are designed to directly address resource management issues and guide management of CBNMS over the next five to ten years. The level of implementation of an action plan and its components will be based upon the funding or resources available each fiscal year. As stated previously, full implementation of the management plan exceeds the resources available to CBNMS, therefore requiring some prioritization of the action plan or strategies. As resources become available, a greater level of implementation is possible. Implementation of most of the strategies in this management plan requires some input or coordination from partners, particularly other government agencies, research institutions and non-governmental organizations (NGOs). Many action plans and strategies are completely dependent on involvement from other agencies or dependent on research conducted by a research institution.

Implementation of the management plan will require: coordination within and between action plans; sharing of staff and financial resources between program areas; and cooperation and

Structure of Action Plans
CBNMS Draft Management Plan

coordination among many federal, state, and local government agencies, as well as private organizations, institutions, and individuals.

Operating funds for CBNMS management come from federal appropriations to the ONMS. These funds cover expenses such as personnel salaries, programs, vessel maintenance, property rental, equipment, and supplies.

Unpredictable and variable funding for staff and program development may affect specific aspects of the management plan. The scale and scope of certain programs may be modified due to any unforeseeable changes in the level of funding, however the goals and objectives of the plan will remain unchanged.

Funding for implementation of many of the strategies will require a mix of internal ONMS funds as well as funding from external sources such as grants or in-kind work from partner agencies. Table 1 depicts the implementation of the CBNMS Management Plan by Action Plan and strategy, and shows several funding scenarios.

Table 1: Implementation of CBNMS Management Plan

Table Legend						
Strategy Status:	Implementation Ranking:	Necessary Partnership Coordination:			Primary Funding Sources:	
● – Existing w/o significant modification	H – High	● – Not possible w/o partners			● – External (e.g., grants)	
◐ – Existing w/significant modification	M – Medium	◐ – Significant reliance on partners			◐ – Internal/External	
○ – New or future (not yet implemented).	L – Low	○ – Little reliance on partners			● – Internal (increased budget)	
					○ – Internal (base budget)	
Action Plans	Strategy Status	Level Funding Scenario 1	Moderate Increase Scenario 2	Substantial Increase Scenario 3	Partnership Coordination	Internal/External Funding Sources
Education and Outreach						
ED-1 General Outreach	●	H	H	H	●	◐
ED-2 Sanctuary Naturalist Program	○	L	M	H	◐	◐
ED-3 Media and Communications	●	H	H	H	◐	○
ED-4 Educational Tools to Promote Ocean Literacy	●	H	H	H	○	◐
ED-5 Interpretive Signage	●	H	H	H	◐	●
ED-6 Integrate Conservation Science into Education	●	H	H	H	○	○
ED-7 Adult Education	◐	M	H	H	●	◐
ED-8 Education Working Group	○	L	M	H	●	●
ED-9 Multicultural Programming	○	L	M	H	●	◐

Structure of Action Plans
CBNMS Draft Management Plan

Table 1: Implementation of CBNMS Management Plan

Action Plans	Strategy Status	Level Funding Scenario 1	Moderate Increase Scenario 2	Substantial Increase Scenario 3	Partnership Coordination	Internal/External Funding Sources
Resource Protection						
RP-1 Track Human Use Activities	●	H	H	H	○	○
RP-2 Address Ship Strikes of Whales	◐	H	H	H	●	◐
RP-3 Profile Fishing Activities in Sanctuary	◐	M	M	M	◐	○
RP-4 Assess Acoustic Impacts	◐	L	M	H	●	◐
RP-5 Assess and Remove Marine Debris	◐	L	M	H	◐	◐
RP-6 Enforcement Plan	●	H	H	H	●	◐
RP-7: Emergency Response	●	H	H	H	●	○
RP-8 Regulations and Permitting	●	H	H	H	○	○
Partnerships with Community Groups						
PC-1 Research Community Partnerships	●	H	H	H	●	◐
PC-2 Develop Sanctuary Advisory Council Links to Community	●	H	H	H	●	○
PC-3 Media Partnerships	◐	M	M	H	●	○
PC-4 Fiscal Partnerships	◐	H	H	H	●	◐
Conservation Science						
CS-1 Oceanographic Climatology Report	○	L	M	H	●	◐
CS-2 Habitat Characterization	●	M	H	H	◐	◐
CS-3 Characterize Soft-Bottom Epifaunal Communities	●	L	M	H	◐	◐
CS-4 Characterize Soft-Bottom Infaunal Communities	○	L	M	M	◐	◐
CS-5 Voucher Specimen Collection	●	L	M	H	●	○
CS-6 Survey Museum Collections	●	L	M	M	●	○

Table 1: Implementation of CBNMS Management Plan

Action Plans	Strategy Status	Level Funding Scenario 1	Moderate Increase Scenario 2	Substantial Increase Scenario 3	Partnership Coordination	Internal/External Funding Sources
CS-7 Pelagic Monitoring	●	H	H	H	◐	◐
CS-8 Fish and Invertebrate Monitoring	●	H	H	H	◐	◐
CS-9 Data Management	◐	H	H	H	○	○
CS-10 Supply/Receipt of Larval Fishes	○	L	M	M	●	◐
CS-11 Proposed Research Activities	◐	L	M	H	●	◐
Administration						
AD-1 Operations	◐	M	M	H	○	◐
AD-2 Staffing	◐	L	M	H	○	○
AD-3 Partnerships	●	M	H	H	●	◐
AD-4 Support Sanctuary Advisory Council	●	H	H	H	●	○
AD-5 Interagency Coordination	●	M	H	H	●	◐
AD-6 Performance Evaluation Strategy	◐	H	H	H	○	○



EDUCATION AND OUTREACH ACTION PLAN

PROGRAM STATEMENT

CBNMS has developed a long-term education and outreach action plan that builds a greater understanding of the sanctuary ecosystem. This action plan seeks to emphasize the ocean's influence on people and people's influence on the ocean using the sanctuary and the greater California Current ecosystem as a focus. CBNMS will work to increase ocean literacy and awareness of the national marine sanctuaries to encourage ocean stewardship.

PROGRAM DESCRIPTION

This action plan addresses the need to cultivate an informed, involved constituency who cares about protecting, conserving, and restoring our precious ocean resources and national marine sanctuaries. It aligns with NOAA's identified need to build a more informed and involved ocean literate public. In addition, the U.S. Commission on Ocean Policy's Final Report-An Ocean Blueprint for the 21st Century, stresses the need to increase the nation's ocean awareness and to improve ocean related education efforts as *"critical to building an ocean stewardship ethic, strengthening the nation's science literacy, and creating a new generation of ocean leaders."* The report concluded an interested, engaged public is an essential prerequisite *"to successfully address complex ocean and coastal-related issues, balance the use of conservation of marine resources, and realize future benefits from the ocean."*

A national survey by the Ocean Project (1999) indicates the American public has a superficial awareness of the importance of the ocean on their daily lives, let alone its importance to all life on the planet. The *Ocean Blueprint* goes on to state, *"The ocean is a source of food and medicine, controls global climate, provides energy, supplies jobs, supports economies, and reveals information about the planet not gained from any other source. While most people do not recognize the number of benefits the ocean provides, or its potential for further discovery, many do feel a positive connection with it, sensing perhaps the vitality of the sea is directly related to human survival."*

In an effort to increase awareness, the ONMS has partnered with the National Geographic Society (NGS), the Centers for Ocean Sciences Education Excellence (COSEE) and the College of Exploration to identify the critical elements of ocean literacy in the context of science. Ocean literacy is defined as *"an understanding of the ocean's influence on you – and your influence on the ocean."* An ocean-literate person understands:

- *the essential principles and fundamental concepts of ocean science (listed below),*
- *can communicate about the oceans in a meaningful way,*
- *can make informed and responsible decisions regarding the oceans and its resources.*

Seven Essential Principles of Ocean Literacy:

1. The Earth has one big ocean with many features.
2. The ocean and life in the ocean shape the features of the earth.
3. The ocean is a major influence on weather and climate.
4. The ocean makes the Earth habitable.
5. The ocean supports a great diversity of life and ecosystems.
6. The ocean and humans are inextricably linked.
7. The ocean is largely unexplored.

Education programs listed in this plan are designed to enhance public awareness and understanding of the sanctuary in the context of its larger ecosystem-the ocean, and how people are connected to it, and to build stewards to take on the responsibility of protecting it. The development of effective and coordinated education programs is a priority for all national marine sanctuaries.

CBNMS will use education and outreach as a resource management tool to address specific priority resource management issues that are identified in the management plan and will coordinate with other program areas such as conservation science and resource protection to disseminate key information. Developing partnerships with other agencies, institutions, and organizations is the key to success in building effective, well-coordinated education strategies. CBNMS and GFNMS will collaborate to serve common audiences.

Awareness raising activities cut both ways in generating greater support for sanctuary protection, as well as greater demand to access sanctuaries. The harsh conditions and remoteness of CBNMS has kept it from the public eye “out of sight, out of mind” and barring historical fishing activities, it has been relatively untouched to date. But as more people learn about the beauty and awe of CBNMS, many will want to go there and experience it either through diving or surface wildlife viewing trips. The sanctuary staff must therefore consistently underscore the message that in order to preserve the fragile balance of this special place, people must love it respectfully. Education and outreach activities therefore will mostly focus on “bringing the place to the people.”

EDUCATION AND OUTREACH GOALS

1. Use education as a management tool to protect the sanctuary’s resources.
2. Build an education program that complements and promotes other CBNMS programs such as conservation science and resource protection.
3. Create an ocean literate public that is informed and involved.

EDUCATION AND OUTREACH OBJECTIVES

1. Take a hierarchical educational approach by developing awareness and building a knowledge base to change behavior and build stewardship.
2. Increase communication and coordination among CBNMS education and outreach programs and partners.
3. Develop programs to target students, teachers, content builders, user/impact groups, influencers, decision makers, and citizens in Sonoma, Marin, and Mendocino watersheds.
4. Develop programs that target diverse audiences including various multicultural, socioeconomic, age and gender groups.

EDUCATION AND OUTREACH STRATEGIES

STRATEGY ED-1: *Develop community support and partnerships for ocean conservation through targeted outreach efforts.*

Activity 1.1 In coordination with GFNMS and MBNMS, build community partnerships by engaging and informing the public about CBNMS, neighboring sanctuaries, and the greater California Current Ecosystem.

- A. Develop tailored outreach messages for specific users and audiences and implement in CBNMS communication plan.
- B. Develop joint outreach materials for CBNMS, GFNMS and MBNMS, including products, lectures, and programs based on established priorities that address ocean literacy, and inspire stewardship by supporting and acknowledging behaviors that protect ocean resources.
- C. Work with the Sanctuary Advisory Council, scientists, users, and regulatory agencies on identifying appropriate messages for reaching out to constituents.
- D. Identify and target outreach/education strategies that are relevant to reach culturally diverse and underserved communities.

STRATEGY ED-2: *Utilize volunteers and interns to assist sanctuary staff in communicating sanctuary messages to a broader audience and carrying out program needs.*

Activity 2.1 Develop a broad-based umbrella program to train volunteers and interns to deliver ocean and sanctuary messages in a variety of settings and venues.

- A. Create a framework and plan for supporting or collaborating with a long term volunteer Sanctuary Naturalist Program that trains volunteers and interns to: deliver outreach and educational messages; and deliver interpretive programs to schools, community groups, and at public events.
- B. Explore potential partnership with organizations to collaborate or develop volunteer programs to facilitate learning opportunities with volunteers and docents about ocean stewardship.
- C. Develop training program and materials for volunteers and interns and provide ongoing learning opportunities for volunteer and interns including opportunities at sea.
- D. Evaluate volunteer/intern satisfaction and effectiveness of outreach program and add new training and volunteering opportunities as appropriate.
- E. Explore long term education/outreach formal intern opportunities.

Activity 2.2 Train volunteers and employees of existing interpretative and volunteer organizations/agencies to deliver and incorporate CBNMS messages through their programs.

- A. Identify and survey potential organizations for needs and willingness to partner with CBNMS to distribute sanctuary and ocean conservation messaging.
- B. Develop general training presentation on CBNMS to reach a variety of education and interpretation audiences and continually update with current issues, topics of interest, and more effective media such as videos and animations.
- C. Create and distribute outreach materials about CBNMS.
- D. Maintain regular communication with partners and provide materials to staff and volunteers as needed.

STRATEGY ED-3: *In coordination with other California national marine sanctuaries, leverage local, regional, and national media opportunities to increase Californians' ocean awareness.*

Activity 3.1 Communicate with the media. Components of the site's media plan will be developed in coordination and cooperation with other California national marine sanctuaries.

- A. Complete CBNMS media and communications plan and review site plan annually as needed. Incorporate ONMS Communication Playbook tools as appropriate.
- B. Define staff's roles and advisory council's roles in working with the media and have all staff and advisory council members and alternates participate in media training.

- C. Develop an annual media plan for upcoming events, including identifying and creating media opportunities, roles, and timelines.
- D. Continue a regular CBNMS spot on local radio station (KWMR). Continue posting podcast of show on CBNMS website.
- E. Develop and maintain relationships with local media.
- F. Develop and distribute press kits at events as appropriate.
- G. Participate in NOAA's Ocean Communicators network (Thank You Ocean campaign). Apply campaign tools to media work at the site.

STRATEGY ED-4: Promote ocean literacy and stewardship to far-reaching audiences through the development of education and outreach tools.

Activity 4.1 Develop portable products as outreach tools to educate a broader audience about the resources and activities of CBNMS and ocean conservation.

- A. Identify audience, purpose, need and justification to design portable products such as, but not limited to multimedia audio/visual products, internet based, hands on activities, teaching aids, exhibits, displays, photo database accessible to the public.
- B. Identify audience, purpose, and need to plan and design printed materials about CBNMS, such as posters, brochures, and one-pagers. Evaluate those in existence and use results in future publications.
- C. Maintain an active, dynamic, and robust website that is continually reflecting changing programs and activities at Cordell Bank NMS and design standards.
- D. Incorporate NOAA approved social media outlets into outreach and communication strategies (e.g., Facebook).

Activity 4.2 Expand CBNMS's reach into K-12 school audiences by creating standards-based curricular activity sets that complement existing curriculum and provide targeted professional development opportunities for teachers.

- A. Identify ocean themes relevant to people's everyday lives.
- B. Identify Ocean Literacy themes, and how these topics apply to National/State based standards.
- C. Develop a finite number of standards-based activities in one or two different age groups (i.e. 4-6th, 7-8th, 9-12 grades).

- D. Engage partners and assemble an advisory group to review and provide feedback on activity sets.
- E. Present activities at science and environmental education related conferences to engage users.
- F. Lead activities at partners' teacher trainings around northern California.
- G. Develop in class program to be delivered in classrooms by interns/volunteers.

STRATEGY ED-5: *In coordination with West Coast Region, increase awareness of CBNMS through interpretive signage and exhibits throughout the region.*

Activity 5.1 Install interpretive signage at key field locations; place exhibits in museums and visitor centers throughout Marin and Sonoma counties and in visitor centers in other counties that include a regional north-central coast focus. Coordinate and collaborate with West Coast Region on presentation and messaging.

- A. Choose sign/exhibit locations based on diversity of visitors, both geographically, culturally, and relevance to messages.
- B. Establish and coordinate partnerships with staff at key locations where signage and exhibits are identified as high priority to message to visitors.
- C. Secure funding, and create culturally and geographically relevant messages, content and designs.
- D. Construct and install signs and exhibits, beginning with highest priority locations as outlined in the regional Long Range Interpretive Plan.
- E. Complete priorities and implement facilities plan for visitor centers as outlined in the regional Long Range Interpretive Plan.
- F. Continue to work closely with the Oakland Museum of California to update Cordell Bank exhibit and content as necessary.

STRATEGY ED-6: *Increase awareness and knowledge of CBNMS Conservation Science and Resource Protection programs by creating opportunities, programs, and materials for teachers and students.*

Activity 6.1 Link CBNMS research programs with teachers and students by exploring ways to integrate conservation science projects into the classroom.

- A. Collaborate with NOAA Teacher at Sea program to place a teacher on CBNMS research/monitoring cruises. *Note: due to variability of weather and ship time, and projects, this program may vary from year to year.*

- B. Collaborate with scientists conducting research in the sanctuary to interpret their findings so results can be understood by broader audiences including students, teachers and media.
- C. Work with participants from teacher at sea programs to develop activities and curriculum associated with field experiences in the sanctuary.

Activity 6.2 Encourage development of marine technology skills and careers in marine education. One of NOAA's goals is to provide skills to the future workforce to become the next leaders in ocean exploration and protection. The CBNMS staff will engage students and teachers in the understanding of marine technology by creating programs that encourage development of marine engineering skills, remote sensing, mapping skills, monitoring skills, and others.

- A. Explore partnerships to further sanctuary awareness through education programs that teach marine technology.
- B. Create materials that are relevant to the Next Generation Science Standards for teachers that utilize marine technology skills and information.
- C. Explore use of GIS technology and partnerships to utilize sanctuary related data sets for curriculum.
- D. Implement marine technology workshops at sanctuary sites to integrate marine technology activities into high school and/or college curriculum.

STRATEGY ED-7: Increase awareness, knowledge, and appreciation of CBNMS through adult education programming.

Activity 7.1 Offer in-depth learning and field opportunities that explore the natural history of CBNMS, ocean conservation issues and the California Current Ecosystem.

- A. Facilitate on the water excursions to CBNMS and surrounding waters with partners.
- B. Create adult education course through community education programs or community colleges in Marin and Sonoma, and create syllabus/curriculum to include a broad overview of topics relating to the sanctuary and broad surrounding ecosystem.
- C. Develop educator focused coastal ecology workshop series to help teachers gain knowledge and experience with the coastal environment, California Current ecosystem and sanctuaries.

STRATEGY ED-8: *Support the Sanctuary Advisory Council in creating an Education Working Group for specific projects or issues.*

Activity 8.1 Support the Sanctuary Advisory Council in creating a working group of education experts from local schools, school districts, county offices of education, educational institutions and, if appropriate, users and other agencies that can inform the Sanctuary Advisory Council on the development and implementation of specific education related projects or management issues.

- A. Provide recommendations and guidance on CBNMS outreach and education programs, or on issues where education can address a CBNMS management issue.
- B. Explore collaborations to create innovative education and outreach programs and reduce potential duplication of efforts.

STRATEGY ED-9: *Develop a multicultural education plan targeting changing demographics in the CBNMS region of northern California.*

Activity 9.1 Identify communities and populations with growing non-English speaking populations. (*North of San Francisco, the Hispanic population is the dominant non-English speaking population.*)

- A. Assess demographic data from counties of Marin, and Sonoma and southern Mendocino counties
- B. Seek partnerships with other agencies, organizations looking to reach underserved audiences in environmental/ocean literacy related content
- C. Collaborate with West Coast Region sites implementing multi-cultural programming at their sites (e.g., MERITO program at MBNMS and CINMS)
- D. Create plan for CBNMS to implement culturally relevant programming for non-English speaking populations, including secure funding scheme and partners' roles.

CBNMS Education and Outreach

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
<p>Strategy ED-1: Develop community support and partnerships for ocean conservation through targeted outreach efforts.</p> <p>Strategy ED-2: Utilize volunteers and interns to assist sanctuary staff in communicating sanctuary messages to a broader audience and carrying out program needs.</p>	Continually reach broader audiences to create an informed and involved public.	Take a hierarchical educational approach by: developing awareness, building a knowledge base, changing behavior and building stewardship.	Increase in support from the community for CBNMS programs.	<p>1) Completion of the Sanctuary Naturalist Corps training program (short-term).</p> <p>2) Increase in the number of outreach opportunities undertaken by the sanctuary staff as a direct result of a well-established and coordinated volunteer program (long-term).</p> <p>3) Increase in number of volunteers (long-term).</p> <p>4) Increase in retention of volunteers (long-term).</p>	Education Specialist, Volunteer Coordinator (GFNMS), and Sanctuary Superintendent	<p>1) Regularly scheduled volunteer training and follow-up/refreshers program.</p> <p>2) Sanctuary Naturalist training manual.</p>
<p>Strategy ED-3: Leverage local, regional, and national media opportunities.</p> <p>Strategy ED-4: Develop education and outreach tools to promote ocean literacy.</p> <p>Strategy ED-5: Increase awareness through interpretive signage and exhibits.</p>	Continually reach broader audiences to create an informed and involved public.	Develop programs to target students, teachers, content builders, user/impact groups, influencers, decision makers, and citizens in Sonoma, Marin, and Mendocino watersheds.	<p>1) Expand messaging tools and venues to continually reach a broader audience.</p> <p>2) Increase attendance in CBNMS programs.</p>	<p>1) Track media coverage to determine increases in exposure.</p> <p>2) Track increase in sanctuary awareness at museums etc. that have sanctuary exhibits.</p>	Education Specialist and Sanctuary Superintendent	<p>1) Increase in number of press releases and radio spots.</p> <p>2) Complete development of outreach tools.</p> <p>3) Complete design, fabrication and installation of signage and displays at new locations.</p>

Education and Outreach Action Plan
CBNMS Draft Management Plan

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
<p>Strategy 6: Increase awareness and knowledge of CBNMS conservation science and resource protection programs by creating opportunities, programs, and materials for teachers and students.</p> <p>Strategy ED-7: Increase awareness and knowledge through adult education opportunities.</p> <p>Strategy ED 8: Support an Education Working Group of the Sanctuary Advisory Council for specific projects or issues.</p>	<p>1) Continually reach broader audiences to create an informed and involved public.</p> <p>2) Use education to complement and promote other CBNMS programs such as research, monitoring, and enforcement.</p> <p>3) incorporate users input into development of new programs and materials.</p>	<p>Take a hierarchical educational approach by: developing awareness, building a knowledge base, changing behavior, and building stewardship.</p>	<p>1) Increase in awareness of CBNMS ecosystem and programs.</p> <p>2) Increase involvement in education programs in the sanctuary by students and teachers, and adults.</p>	<p>1) Track increase of teachers, students and adults participating in CBNMS programs.</p> <p>2) Track increase in use of CBNMS ecosystem topics integrated into school curricula.</p>	<p>Education Specialist and Sanctuary Superintendent</p>	<p>1) Classroom curriculum</p> <p>2) Products for teacher</p> <p>3) Website content</p>
<p>Strategy ED 9: Develop multicultural plan that is targeted to the changing demographics in the CBNMS region of northern California.</p>	<p>1) Continually reach broader audiences to create an informed and involved public.</p> <p>2) Develop targeted strategies to reach diverse audiences.</p>	<p>Take a hierarchical educational approach by: developing awareness, building a knowledge base, changing behavior, and building stewardship.</p>	<p>1) Increase in awareness of watershed and ocean environment.</p> <p>2) Increase in participation of CBNMS education programs by culturally diverse communities.</p>	<p>1) Create plan that involved regional partners to target culturally diverse communities.</p>	<p>Education Specialist and Sanctuary Superintendent</p>	<p>1) Multicultural education plan created</p> <p>2) Multicultural education working group assembled to advise on plan</p>

KEY PARTNERS

GFNMS, MBNMS, ONMS West Coast Regional Office (WCRO), advisory council for CBNMS, advisory council for GFNMS, Point Reyes National Seashore (PRNS), Golden Gate National Recreation Area (GGNRA), California Coastal Monument, California State Parks, San Francisco Bay National Estuarine Research Reserve (SFBNERR), Sonoma County Regional Parks, Spud Point Marina, U.C. Davis - Bodega Marine Laboratory (BML), Sonoma State University, other local universities, Santa Rosa Community College, College of Marin, Monterey Peninsula College, local schools, Tam Union High School District Adult and Community Education, Offices of Education in the Bay Area, Bay Watershed Education and Training (BWET) program/Ocean Guardian Grant recipients, Multicultural Education for Resource Issues Threatening Oceans (MERITO) Program, Marine Advanced Technology Education (MATE) Center, Center for Image Processing and Education (CIPE), California ocean communicators alliance (Thank You Ocean), libraries, Porto Bodega, NGS, KWMR: Community Radio for West Marin, The Sea Ranch Association, National Marine Sanctuary Foundation (NMSF), Cordell Marine Sanctuary Foundation (CMSF), Farallones Marine Sanctuary Association (FMSA), Point Reyes National Seashore Association (PRNSA), Oakland Museum of California, California Academy of Sciences, Stewards of Coast and Redwoods, The Marine Mammal Center (TMMC), Fort Ross Conservancy, Oikonos Ecosystem Knowledge, various watershed councils, Environmental Forum of Marin, Point Blue Conservation Science (PBCS), Pacific Coast Science and Learning Center, various non-profits in Bay Area doing environmental education and science education, and NGOs that work with multicultural populations.



RESOURCE PROTECTION ACTION PLAN

ISSUE STATEMENT

Specific impacts from various activities on CBNMS natural resources are complex and difficult to document and manage. Some of the issues include: (1) emergency preparedness and emergency response limitations; (2) vessel traffic and ship strikes on whales; (3) acoustic impacts of anthropogenic noise in the ocean; (4) impacts on benthic habitats from fishing gear; and (5) impacts from marine debris.

ISSUE DESCRIPTION

CBNMS is located in one of the world's four major upwelling systems. The upwelling of nutrient-rich, deep ocean water provides a food-rich environment and promotes the growth of organisms at all levels of the marine food web. The vertical relief and hard substrate of Cordell Bank provides habitat with nearshore characteristics in an open ocean environment about 23 miles (20 nautical miles) from shore. The tremendous biodiversity found in the sanctuary includes fishes, marine mammals, seabirds, sea turtles, algae, and benthic and pelagic invertebrates.

The northern traffic lane passes through CBNMS and provides entry and egress for commercial vessels calling on ports in San Francisco Bay. In summer and fall, this same area is a feeding area for endangered blue, fin and humpback whales. In years when large concentrations of whales are feeding in the sanctuary, ships using the traffic lane have inadvertently struck and killed whales. The sanctuary staff continues to coordinate with the USCG, NMFS, industry and other partners to better understand this issue and will work with partners to reduce the risk of ships striking whales.

Noise levels in the marine environment have been rising due to anthropogenic sources such as increased shipping traffic, sonar technologies, and research projects. The effects of noise on marine mammals, seabirds, fishes, and turtles is not entirely known, though it is thought to negatively affect various life functions such as finding prey, navigating, mating, and evading predators. For example, active sonar has been conclusively linked to the deaths of whales in some areas. In addition, an increase in low frequency sounds from shipping traffic has been shown to significantly alter ambient noise in various parts of the world's oceans. Issues of concern in CBNMS include the effects of acoustics on marine mammals by ships, the military, research, or other influences. NOAA and its partners have conducted and continue to conduct

research regarding the effects of sound disturbance on marine mammals; however additional CBNMS-specific research and monitoring may be necessary.

Commercial and recreational fisheries in CBNMS have historically targeted rockfish, Lingcod, flatfish, salmon, Albacore Tuna, and crab. Most of the private boats and charter vessels that fish CBNMS are from Bodega Bay, although rough ocean conditions often prevent smaller recreational boats from accessing CBNMS. Gear types used in CBNMS over the years have included bottom trawl, mid-water trawl, hook and line, gill nets, crab traps, and long lines (including troll long line, vertical long line, and fixed gear long line). Management of commercial and recreational fisheries in California is the responsibility of NMFS the PFMC, and CDFW. CBNMS is entirely in federal waters.

Debris in the ocean and along the shore is a growing concern. Various types of debris are known to have adverse effects on marine species. Plastics in the marine environment never fully degrade and recent studies show plastic is consumed by organisms at all levels of the marine food web. Dichlorodiphenyltrichloroethane (DDT) and other hydrophobic compounds are known to adhere to plastics. Ingestion and entanglement are some of the many problems associated with marine debris, which may eventually lead to death for many organisms. The types of marine debris causing the most concern include balloons, abandoned/discarded fishing gear, Styrofoam, and consumer goods including 6-pack rings, plastic shopping bags, and other plastics.

Significant amounts of derelict fishing gear have been documented in CBNMS. This includes long lines, gill nets, crab gear, trawls and trawl warps entangled on and around the Bank. CBNMS research has demonstrated that the Bank's physical structure and benthic invertebrate community provides critical habitat for recovering stocks of west coast rockfish (*Sebastes* spp.). The PFMC identified Cordell Bank as a Habitat Area of Particular Concern under their Essential Fish Habitat designation. One concern is that the abandoned fishing gear on Cordell Bank may be negatively impacting sanctuary resources, creating artificial habitat for marine life, and potentially impacting the physical structure of the Bank. This derelict gear also poses a danger to personnel and equipment involved in CBNMS research and monitoring activities.

JURISDICTIONAL SETTING

Restricted Access Fisheries

Management of commercial and recreational fisheries in California is the responsibility of CDFW, NMFS and the PFMC. Restricted access programs in fisheries limit the quantity of persons, vessels, or fishing gear that may be engaged in the take of a given species of fish or shellfish. Restricted access may also limit the catch allocated to each fishery participant through harvest rights such as individual or community quotas. A primary purpose of restricted access programs is to balance the level of effort in a fishery with the health of the fishery resources. In

most situations, except harvest rights, this involves setting an appropriate fishery capacity goal (California Department of Fish and Game 2001⁵).

California's Restricted Access Programs

In 1977, the California Department of Fish and Game (now CDFW) focused its first limited access program on the abalone fishery, followed in 1979 with legislation requiring Salmon limited entry permits. In the 1990s, industry began to demand more restricted access programs, so the Department decided the time had come to address restricted access in a comprehensive manner. In 1996, a limited entry review committee was formed to develop a standard restricted access policy for the Fish and Game Commission (FGC). The commission approved the restricted access policy in June 1999 (California Department of Fish and Game 2001).

Marine Life Protection Act (MLPA)

Passed by the California State Legislature in 1999, the MLPA required the California Department of Fish and Game to redesign its system of marine protected areas (MPAs) to increase its coherence and effectiveness at protecting the state's marine life, habitats, and ecosystems. For the purposes of MPA planning, a public-private partnership commonly referred to as the MLPA Initiative was established, and the state was split into five distinct regions (four coastal and the San Francisco Bay) each of which had its own MPA planning process. The planning processes for the four coastal regions was completed, and the coastal portion of California's MPA network is in effect.

Marine Life Management Act (MLMA)

The California MLMA requires CDFW and the FGC to evaluate existing restricted access programs every five years. These evaluations and increase in restricted access programs will require CDFW to expand capabilities to collect and analyze economic and social data related to fisheries. Socioeconomic data and biological data about fisheries resources are key components in developing and evaluating restricted access policy alternatives.

Federal Restricted Access Program: MSFCMA

The implementation of the MSFCMA by the PFMC and NMFS virtually eliminated all foreign fishing vessels by extending the United States jurisdiction and control over all marine fisheries resources within 200 nautical miles of the U.S. coast. The act required the establishment of eight regional fishery management councils composed of federal and state fishery management officials and industry representatives. The councils have oversight on developing, monitoring, and revising fishery management plans for each fishery within the U.S. Exclusive Economic Zone (EEZ) that requires management. Every fishery management plan drafted by a fishery management council must be approved by the Secretary of Commerce by way of NMFS.

⁵ California Department of Fish and Game. December 2001, *California's Living Marine Resources: A Status Report*, Sacramento, California.

Marine Mammal Protection Act and Endangered Species Act

The NMFS shares responsibility with the USFWS for the implementation of the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA) to protect of any endangered, threatened or otherwise depleted species.

RESOURCE PROTECTION GOALS

1. Improved understanding of human use impacts.
2. Allow for activities that are compatible with ecosystem health.

RESOURCE PROTECTION OBJECTIVES

1. Maintain working relationship with state and federal fisheries management agencies.
2. Track, evaluate, and address, as appropriate, existing, new, and emerging issues for their potential impacts on sanctuary resources.
3. Support adaptive management plans that promote ecosystem health.
4. Broaden and formalize partnerships between CBNMS, fishing community, and NGOs.
5. Increase awareness and monitoring of anthropogenic impacts on marine organisms in CBNMS.
6. Document and remove marine debris in CBNMS 7. Be prepared to respond to incidents with the CBNMS emergency response plan.

RESOURCE PROTECTION STRATEGIES

STRATEGY RP-1: *Establish ongoing process to track human use activities and their impacts in and around sanctuary waters.*

Activity 1.1 Work with the Sanctuary Advisory Council to establish resource protection working groups of the Sanctuary Advisory Council.

- A. Work with the Sanctuary Advisory Council to establish appropriate representation from the fishing community, other stakeholders, interest groups, NGOs and agencies to sit on resource protection working groups as needed and advise the Sanctuary Advisory Council on how to address specific types of activities that may not be compatible with the CBNMS primary purpose of resource protection.

Activity 1.2 Develop a process to continually identify trends in current, new, and emerging activities.

- A. Work with the Sanctuary Advisory Council to identify current, new, and emerging activities taking place in and around sanctuary waters.
- B. Work with the fishing community, mariners, the research community, and other resource management agencies to identify current, new, and emerging activities taking place in and around sanctuary waters.

STRATEGY RP-2: *Address the issue of ship strikes of whales in CBNMS, GFNMS and MBNMS.*

Activity 2.1 Endangered blue (*Balaenoptera musculus*), fin (*Balaenoptera physalus*) and humpback whales (*Megaptera novaeangliae*) feed within GFNMS, CBNMS, and MBNMS. Large commercial vessels also transit these sanctuaries heading to and from ports in San Francisco Bay and major ports in the Pacific Rim. The co-occurrence of these two global populations (whales and ships) in space and time creates an elevated risk of vessel strikes, and thus mortality, to whales.

- A. Continue to work with GFNMS, MBNMS, and the ONMS West Coast Region to support activities that reduce ship strikes to whales.
- B. Implement recommendations from the final report (June 2012) produced by GFNMS and CBNMS Sanctuary Advisory Council Joint Working Group on Vessel Strikes and Acoustic Impacts.
- C. Continue monitoring whale abundance with at sea surveys, land based observation points and aerial flight to collect data.
- D. Use near real time data to communicate with USCG and have a USCG advisory broadcast to vessels traveling in the vicinity of whale aggregations.
- E. Develop an education and outreach plan focused on engaging and informing the commercial maritime industry about the ship strike issue.

STRATEGY RP-3: *Profile fishing activities and communities in and around the sanctuary to better understand levels of impacts specific to CBNMS.*

Activity 3.1 Update fishing activities and socioeconomic profile for fishing in the sanctuary. Analysis would include information on numbers of boats actively engaged in each fishery; areas where the fishery is taking place; gear types; catch levels; a socioeconomic profile of the harbors and marinas accessing the sanctuary; and an understanding of markets, changing gear types, and changing fisheries management regulations that influence this profile. Information exchange

with mariners will provide important input to the profile, and provide support for continual update of the database.

STRATEGY RP-4: *Assess acoustics impacts from anthropogenic sources on sanctuary resources.*

Activity 4.1 Expand research and monitoring of acoustics in CBNMS.

- A. Gather more information and data on the effects of sound in the marine environment.
- B. Work with partners to conduct passive acoustic monitoring to identify and quantify sources of anthropogenic noise underwater and continue to be apprised of survey and monitoring activities that are evaluating the effects of sound.

Activity 4.2 Continue evaluation of individual projects with potential acoustic disturbance.

- A. Continue evaluating individual proposals on a case-by-case basis to determine impacts of proposed projects, and make management recommendations.
- B. Work with NMFS and other partners to determine acceptable sound levels in the different frequency ranges affecting wildlife.

STRATEGY RP-5: *Assess impacts from marine debris on sanctuary resources and conduct mitigation activities.*

Activity 5.1 Work with partners to expand GIS database to track and characterize type, location and amounts of benthic marine debris in CBNMS observed during benthic monitoring, mapping and characterization research activities.

Activity 5.2 Continue to monitor pelagic marine debris and incorporate into monitoring activities.

Activity 5.3 Work with partners in removing derelict fishing gear from CBNMS.

- A. Work with partners to assess the feasibility and test new methods of removing derelict fishing gear from deep water environments like Cordell Bank.
- B. Work with partners in the removal of derelict fishing gear from deep water benthic habitats.

STRATEGY RP-6: *Enhance resource protection through increased compliance with CBNMS regulations and other applicable state and federal statutes.*

The mission of enforcement for the sanctuary is to ensure compliance with the NMSA (16 USC § 1431 et seq.) and appropriate CBNMS regulations (15 CFR § 922). The approach to the enforcement program should be two-fold in nature: (1) the use of interpretive enforcement (such as public outreach) as a tool to inform and encourage voluntary compliance; and (2) the use of patrols and other traditional law enforcement methods to enforce regulations and investigate and respond to suspected prohibited activities. Together, these two programs should result in a regular and ongoing enforcement presence in sanctuary waters and compliance with CBNMS regulations.

Activity 6.1 Ensure sufficient patrol presence in the sanctuary through the development of partnerships and interagency coordination. To that end, CBNMS needs to maintain an active enforcement relationship with the USCG, NOAA OLE, CDFW, and Sonoma County Sheriff's Office (Bodega Bay).

- A. Coordinate with other enforcement authorities on patrols in CBNMS or its airspace, investigations, regulatory violations, permit violations, incidents, and citizen complaints.

Activity 6.2 Use interpretive enforcement as a tool to inform and encourage voluntary compliance with CBNMS regulations. Interpretive enforcement may be used to affect behavior and change values. Interpretive enforcement efforts will include:

- A. Train Sanctuary Naturalist Program volunteers to use interpretive enforcement (see Education STRATEGY ED-2).
- B. Develop signage program at Bodega Harbor.
- C. Work with California Department of Motor Vehicles to include informational inserts in boat license renewal packets (to be coordinated with all California national marine sanctuaries).
- D. Give presentations at yacht clubs and to Coast Guard Auxiliary Flotillas.
- E. Provide follow-up letters to possible violators with “you may be in violation” notices that inform the boater about CBNMS regulations.

Activity 6.3 Encourage and assist the efforts of local and regional port, harbor, and marina management entities and state and local agencies to improve availability and use of wastewater pump-out facilities and dump stations for vessels.

STRATEGY RP-7: *Develop a plan that prepares sanctuary staff to respond to an emergency in or adjacent to the sanctuary. This plan will provide the framework for a seamless operation in cooperation with other federal, state, and local emergency response agencies in California. The plan will be developed in coordination with GFNMS and MBNMS.*

Activity 7.1 CBNMS will review and revise its emergency response plan, based on the Incident Command System (ICS) and the USCG's Area Contingency Plan (ACP), to respond to oil spills, hazardous material spills, sunken vessels, or natural disasters. In coordination with GFNMS and MBNMS, the response plan will be reviewed, evaluated, and updated on an annual basis. CBNMS's emergency response plan will:

- A. Lay out emergency response notification plans (including all relevant agencies, user groups and media) and preparation procedures.
- B. Include coordination and decision-making responsibilities on use of dispersants.
- C. Identify specific duties for sanctuary staff.
- D. Develop damage assessment guidelines.

Activity 7.2 All appropriate sanctuary staff will be trained on an ongoing basis with regular updates and refresher courses, and will be ready to respond in the case of an emergency. Staff training to include:

- A. Understanding the ICS.
- B. Familiarization with the ACP.
- C. Assigned emergency response duties.
- D. Taking part in emergency response drills.
- E. Developing resource damage assessment skills.

STRATEGY RP-8: *Continuously evaluate the appropriateness and effectiveness of current CBNMS regulations , including permit procedures in addressing the priority resource management issues identified in the management plan.*

CBNMS uses two complementary and strategic tools to carry out an ecosystem management approach: (1) programs, which address resource management issues through the use of Education and Outreach, Conservation Science, and Resource Protection; and (2) regulations, which help establish priorities for guiding or restricting human behavior that may not be compatible with resource protection.

Activity 8.1 To ensure that CBNMS's regulations provide protection for natural resources and address the site's priority resource management issues, CBNMS will take the following steps:

- A. Evaluate the appropriateness and effectiveness of current regulatory language on a regular basis.
- B. Propose new regulations or amendments to current regulations based on the evaluation and need for action to respond to current, new and emerging human-use activities that may be inconsistent with the CBNMS primary goal of resource protection.
- C. Provide guidance and understanding of policy in the NMSA.
- D. Ensure, to the extent appropriate, coordination and consistency with other resource management agencies' regulations and permits.
- E. Track, review, and comment on environmental assessments and environmental impact statements prepared by other agencies.

Activity 8.2 The CBNMS permit program provides a mechanism to review requests to conduct prohibited activities within the sanctuary, and where possible, permit these activities to be conducted in a way that results in negligible effects. Generally, these requests are for research or education purposes. CBNMS staff members evaluate these requests on a case-by-case basis in detail to consider factors such as whether the activity needs to be conducted in the sanctuary; the value of the activity; the proposed methods and procedures; and the activity's effect in the sanctuary.

- A. In order to understand, measure, and control prohibited activities within the sanctuary, and to minimize cumulative impacts from these activities, the permit program will:
 - i. Evaluate permit requests on a case-by-case basis.
 - ii. Develop permit requirements to applicants on procedures and operations to avoid or reduce impacts to sanctuary resources.
 - iii. Monitor permitted activities to ensure compliance with permit conditions and to understand direct and cumulative impacts.
 - iv. Require applicants provide the sanctuary staff with the data and findings gained through research conducted with research permits.
- B. Certain educational or research activities may violate CBNMS prohibitions, although actual environmental impacts to sanctuary resources may be negligible. A streamlined application process could be developed for activities that clearly fall within this category.

- i. Develop a streamlined application process by creating a simple form on which applicants can submit concise and relevant information.
- ii. Develop a system to issue programmatic permits that may include many activities conducted by one organization or institution under one permit.

Resource Protection

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
Strategy RP-1: Establish process to track human use activities and their impacts in and around sanctuary waters.	Better understand and allow for activities that are compatible with CBNMS goals and ecosystem health.	1) Track, evaluate, and address, new and emerging issues for their potential impacts on sanctuary resources. 2) Support adaptive management plans that promote ecosystem health. 3) Develop "compatible use" standards for activities that complement the CBNMS primary objective of resource protection.	Improved ability to carry out a consistent and systematic evaluation of impacts from activities occurring in the sanctuary and decrease mitigatable threats.	1) Complete "compatible use" definition or threshold 2) Complete "compatibility index" framework 3) Develop series of management or policy response categories	Sanctuary Superintendent, Resource Protection Coordinator, Resource Protection Working Group, Sanctuary Advisory Council	1) Process for tracking existing, new, and emerging issues 2) Compatibility index matrix 3) Increased resource protection
Strategy RP-2: Address the issue of ship strikes of whales in the sanctuary.	Reduce ship strikes of whales in CBNMS and the region.	1) Support activities reducing ship strikes of whales, including those in Joint Working Group recommendations. 2) Monitor whale abundance. 3) Communicate whale data to USCG so they may advise mariners travelling near whales. 4) Develop education and outreach plan about ship strike issue.	Improved knowledge of whale occurrence and decreased number of ship strikes of whales in CBNMS and the region.	1) Track status and completion of planned activities 2) Record data on whale sightings 3) Record whale strikes by strikes	Resource Protection Coordinator, GFNMS, MBNMS, ONMS West Coast Region, NMFS, USCG, other partners	1) Spotter application developed, publicized and refined. 2) Advisories to mariners 3) Whales struck by ships 4) Education and outreach plan about ship strike issue.

Resource Protection Action Plan
Draft CBNMS Updated Final Management Plan

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
Strategy RP-3: Profile fishing activities and communities in and around the sanctuary.	Better understand levels of impacts in CBNMS.	1) Study to understand fishing activities in CBNMS, markets for fish caught in CBNMS, relevant fishing communities, and regulations. 2) Dialogue with fishing community.	Report profiling fishing communities and activities in and around the sanctuary, supported by data.	1) Gather data on number of boats by fishery 2) Determine where/how fishing taking place 3) Gather data on catch levels and markets 4) Describe relevant fishing regulations 5) Compile all data	Resource Protection Coordinator, ONMS Chief Economist, ONMS West Coast Region	1) Profile of fishing activities and socioeconomic profile for CBNMS. 2) Database containing the fishing and community data
Strategy RP-4: Assess impacts from acoustics on sanctuary resources.	Expanded research and monitoring leading to better understanding of how sound levels by frequency affect wildlife in CBNMS.	1) More acoustics research and monitoring activities 2) Data that enables analysis of sound impacts on wildlife and can inform management recommendations.	Larger suite of acoustics research projects with results that inform management.	1) Track status and completion of acoustic research and monitoring activities 2) Evaluate projects for impacts	Resource Protection Coordinator, NMFS, other partners	1) Data on effects of sound on wildlife, including which sound levels do not lead to impacts. 2) List of passive acoustic monitoring projects 3) Evaluations of projects 4) Recommendations stemming from evaluations.
Strategy RP-5: Assess impacts from marine debris on sanctuary resources and conduct mitigation activities.	Understanding of the debris in CBNMS and mitigation of impacts from marine debris.	1) Assessment of marine debris in CBNMS. 2) Completed mitigation activities.	Description of amount and locations of marine debris in CBNMS and projects completed.	1) More data included in database 2) Protocols developed to monitor marine debris	Resource Protection Coordinator, NOAA Marine Debris Program	1) Expanded GIS database with marine debris data 2) Marine debris monitoring protocols for monthly monitoring 3) Methods for removing marine debris 3) Amount of marine debris removed

***Resource Protection Action Plan
CBNMS Draft Management Plan***

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
Strategy RP-6: Enhance resource protection through increased compliance with CBNMS regulations and other applicable state and federal statutes.	Ensure compliance with the NMSA (16 USC § 1431 et seq.) and appropriate CBNMS regulations (15 CFR § 922).	Assessment of regulatory compliance with sanctuary regulations.	Description of level of compliance with sanctuary regulations.	1) Track number and status of regulatory infractions	Resource Protection Coordinator, NMFS, other partners	Decreased number of infractions over life of management plan
Strategy RP-7: Develop a plan that prepares sanctuary staff to respond to an emergency in or adjacent to the sanctuary.	Maintain the natural ecological processes in CBNMS.	Continue to develop partnerships to take comprehensive ecosystem protection approach.	Increased ability to respond to emergency in a coordinated and timely manner.	Review and revise plan so that it is current and relevant for emergency response activities	Sanctuary Superintendent, Resource Protection Specialist	Emergency Response Plan that provides the framework for a seamless operation in cooperation with other federal, state, and local emergency response agencies
Strategy RP-8: Continuously evaluate appropriateness and effectiveness of current CBNMS regulations in addressing the priority resource management issues.	Ensure that CBNMS regulations are addressing priority resource management issues	Review regulations on regular basis or when necessary to respond to emerging issues.	Effective protection for sanctuary resources.	Evaluate protection for sanctuary resources to ensure CBNMS regulations are effective	Sanctuary Superintendent and Resource Protection Specialist	Regulations that effectively protect sanctuary resources

KEY PARTNERS

GFNMS, MBNMS, Channel Islands National Marine Sanctuary (CINMS), Olympic Coast National Marine Sanctuary (OCNMS), advisory council for CBNMS, NOAA's National Centers for Coastal Ocean Science (NCCOS), NOAA's Coastal Services Center (CSC), USCG, NMFS, PFMC, other federal agencies, CDFW, University of California-Davis Wildlife Health Center, State Coastal Conservancy, Scripps Institute of Oceanography, other state agencies, Sonoma County Sheriff's Office, CMSF, FMSA, TMMC, National Fish and Wildlife Foundation, fishing community, shipping industry, topical experts, stakeholders/experts/user groups, and NGOs.



PARTNERSHIPS WITH COMMUNITY GROUPS ACTION PLAN

ISSUE STATEMENT

In order to fully carry out its mission, CBNMS needs to develop community partnerships to maximize its limited resources and minimize the risk of working in isolation and missing partnership opportunities. Through community partnerships, opportunities will be leveraged to develop public awareness, education, and stewardship; obtain volunteer, financial, and in-kind support; and increase research opportunities.

ISSUE DESCRIPTION

The site's primary programs are focused on conducting research, developing associated education programs, and identifying and protecting the sanctuary's natural resources and habitats. CBNMS is an offshore site that, due to its more remote location, does not have the same level of interest and support enjoyed by near-shore sanctuaries. As a result, CBNMS faces a significant challenge in effectively augmenting its unique identity in the community and increasing community interest and support.

One way to achieve the CBNMS management goals is through community partnerships. Sanctuary management functions more effectively with community support. All sanctuary managers and their staffs work with sanctuary advisory councils, community groups, and agencies to provide support in reaching out to the community and building stewardship. Working in concert with other agencies, institutions and organizations will allow CBNMS to:

- Not duplicate efforts of other agencies and community groups; and
- Have opportunities to leverage research partnerships and expertise, develop public awareness and education, build public support, and leverage and build financial and in-kind support.

PARTNERSHIPS WITH COMMUNITY GROUPS GOALS

1. Maximize partnerships to enhance the CBNMS staff's ability to identify, understand, and protect sanctuary resources.
2. Instill within the community a sense of value and stewardship of the sanctuary.

PARTNERSHIPS WITH COMMUNITY GROUPS OBJECTIVES

Create partnerships to:

1. Further research and monitoring that assist in answering resource management questions.
2. Establish a strong identity for the sanctuary within various interest groups in the community.
3. Identify and cultivate partners to increase in-kind support and, in cooperation with non-profit partners, identify potential sources of revenue.
4. Build education programs that build stewardship to support and advocate for the needs of the sanctuary.

PARTNERSHIPS WITH COMMUNITY GROUPS STRATEGIES

STRATEGY PC-1: *Develop partnerships with the research and education community to leverage opportunities and expertise to fulfill the CBNMS research and education goals.*

Activity 1.1 Collaborate with other research entities including agencies and institutions to share in-kind resources and services.

- A. Identify potential research and education partners, including other resource management agencies, marine research institutions, and individual researchers.
- B. Identify ways to collaborate with potential partners. The CBNMS staff should determine what it could offer to the partnership, including but not limited to providing ship time, housing, and/or outreach opportunities. For example, collaborations might include partnering on grants, internship programs, and symposiums.
- C. Identify opportunities for funding to support field researchers and an internship program.
- D. Partner on outreach components of research/monitoring programs (may also satisfy grant requirements).

Activity 1.2 Collaborate with other education and outreach partners such as agencies, non-profits, museums, and others to share projects, in kind resources, collaborate on shared audiences and education goals.

- A. Identify potential education partners with shared goals for education.

- B. Identify CBNMS education/outreach programs that could be accomplished through collaborations: criteria to include facilities, staff resources, related education goals and shared audiences.
- C. Identify opportunities for funding to support education/outreach interns to help with site projects.

STRATEGY PC-2: *Continue to develop the Sanctuary Advisory Council's link to the community.*

Activity 2.1 Raise the profile of CBNMS by identifying the role of Sanctuary Advisory Council members in increasing awareness of the sanctuary and encouraging them to reach out to their constituencies and the community-at-large.

- A. Review “lessons learned” from other sanctuary advisory councils and coordinators in the ONMS to learn from successes and failures in reaching out to their community and constituencies.
- B. Provide media training to council members. Develop support materials such as PowerPoint or slide presentations for council members to use.
- C. Work with advisory council members on ways to engage constituents.
- D. Clarify and evaluate the council chair's role, responsibilities, and expectations for representing the advisory council.
- E. Consider expanding representation on Sanctuary Advisory Council if warranted by new management responsibilities.

STRATEGY PC-3: *Use media opportunities to promote the CBNMS programs and raise its identity in Marin, Sonoma, and Mendocino counties.*

Activity 3.1 Use media opportunities to raise the identity of CBNMS within the surrounding coastal and greater communities.

- A. Identify and implement effective use of media tools to reach broad audiences (through newspaper, TV, radio). Incorporate key research findings into outreach messages.
- B. Keep the media informed about current CBNMS activities.
- C. Nurture relationships with key media individuals and organizations. Work with regular columnists to create marine-focused columns and features in the local papers. Work with local radio stations to incorporate feature stories about the sanctuary into their programming.

STRATEGY PC-4: *Identify mechanisms to raise and manage additional sources of revenue and in-kind services.*

Activity 4.1 Developing partnerships will allow the sanctuary staff to leverage resources. As the need arises, CBNMS will develop partnerships to manage and generate additional sources of revenue and in-kind support to fully implement this management plan.

- A. Coordinate with Cordell Marine Sanctuary Foundation (CMSF), a non-profit organization with a mission to support the research, education and management goals of CBNMS.
- B. Explore mechanisms such as individual donations, grants, and events to generate additional sources of revenue.
- C. Implement mechanisms to build community capacity in helping generate donations.

CBNMS Partnerships with Community Groups

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
Strategy PC-1: Develop partnerships with the research community to leverage opportunities and expertise, and fulfill the CBNMS research goals.	Maximize partnerships to facilitate the ability of the CBNMS staff to identify, understand, and protect sanctuary resources.	Create partnerships to further research and monitoring and to assist in answering resource management questions.	Increase in number of collaborative research projects within the sanctuary.	Identify and secure outside funding for research projects including in-kind services and support.	Sanctuary Superintendent, Research Coordinator	
Strategy PC-3: Use media opportunities to promote the CBNMS research programs and raise the identity of CBNMS in Marin, Sonoma, and southern Mendocino counties.	Instill within the community a sense of value and stewardship of the sanctuary.	Create partnerships to establish a strong identity for CBNMS within various interests of the community.	Increase in support from the community for CBNMS programs.	Track media coverage to determine increases in exposure.	Education Coordinator	Articles in newspapers and other media coverage
Strategy PC-4: Identify mechanisms to raise and manage additional sources of revenue.	Identify partner to raise and manage revenue.	Work with partner to raise and manage additional revenue.	Additional revenue generated by partner.	Track amount of additional revenue.	Superintendent	Additional revenue



CONSERVATION SCIENCE ACTION PLAN

PROGRAM STATEMENT

Characterization, monitoring, and research have been the cornerstone of CBNMS conservation science activities. All three activities will continue to be a high priority, and CBNMS staff members will integrate their project findings into management and education and outreach programs. Two specific areas the CBNMS staff will focus on are: (1) development of a coordinated and integrated characterization and research program for CBNMS; and (2) continuation of long-term monitoring activities.

PROGRAM DESCRIPTION

CBNMS is an intriguing site because of its high biological diversity and its remote location. As a result, scientific investigations have been taking place ever since its discovery. CBNMS is a difficult place to study on a regular basis in large part because of unpredictable and harsh offshore oceanic conditions. The first extensive study of the center piece of CBNMS, Cordell Bank, was conducted from 1977 to 1987 by Cordell Expeditions. The researchers documented life on the Bank in over 3000 photographs, considerable film and video footage, and a large collection of biological specimens.

Since 1997, CBNMS and GFNMS have been involved in exploration and investigation of the marine life and habitat of the site through an Ecosystem Dynamics Study. This long-term study focuses on the distribution and relative abundance of krill, an important building block in the food chain for this area. Through the use of acoustics and net sampling, krill are located and identified. The physical parameters influencing their distribution are investigated. These data are analyzed along with seabird and marine mammal sightings to better understand why marine life concentrates in particular areas of the sanctuary. This program evolved into a partnership with PBCS in 2004 and now called Applied California Current Ecosystem Studies (ACCESS).

Remotely operated vehicles (ROV) and other technology are used to characterize the benthic biota and habitats in CBNMS. In September 2001, sanctuary biologists and partners conducted initial surveys of the Bank with the Delta submersible, characterizing habitats and documenting species distribution and abundance. CBNMS conducted these studies between 2001 and 2005 to increase the understanding of this unique environment and to better manage the sanctuary's resources.

CONSERVATION SCIENCE GOALS

1. Increase our knowledge and understanding of the CBNMS ecosystem.
2. Develop new and continue ongoing research programs to identify and address specific resource management issues.
3. Develop new and continue ongoing monitoring programs to understand long-term status and trends to guide management.

CONSERVATION SCIENCE OBJECTIVES

1. Characterize the habitats and communities of CBNMS; evaluate and synthesize characterization data and information.
2. Continue monitoring activities to identify indicators and understand natural variation and impacts from human activities on the CBNMS marine ecosystem.
3. Recommend research and monitoring results for inclusion in CBNMS's outreach and education programs.
4. Develop new and continue existing partnerships with other agencies and institutions.

CONSERVATION SCIENCE STRATEGIES

STRATEGY CS-1: *Prepare an oceanographic climatology report.*

Physical oceanography is integral to the CBNMS ecosystem and is not well understood. To fully characterize the sanctuary, a complete and detailed understanding of the oceanographic and atmospheric conditions in and around the sanctuary is needed.

Activity 1.1 Prepare an oceanographic climatology report summarizing existing knowledge about the physical oceanography and meteorology of this region. This information will expose voids and shortcomings in the existing data, and serve as a guide for designing future programs.

- A. Conduct short-term data analyses from compiled data.
- B. Using existing data, construct a climatology of the oceanographic and meteorological conditions in and around CBNMS and GFNMS. This document will contain figures, diagrams, satellite images, and tables that illustrate the prevailing environmental conditions, together with text that interprets, synthesizes, and summarizes this information. The report will deliver recommendations to the sanctuary management for future studies that are needed to characterize the physical environment in and around the sanctuary.

STRATEGY CS-2: *Map and characterize CBNMS's habitats.*

Habitat maps will provide important baseline information for management including: relative proportions of sanctuary habitats; the current state of sanctuary resources as a basis against which to measure future change; unique habitats; unique potential habitat for species of concern including essential fish habitat; and extent of habitat damage from human disturbance.

Activity 2.1 Conduct sonar surveys to determine habitat types and their spatial extent, specifically delineate: (1) rocky regions and outcrops within low relief soft bottom areas of sanctuary; (2) soft and mixed sediments within the Bank region; (3) trawl disturbance in soft sediments; (4) submerged cultural resources; and (5) soft and hard bottom habitats associated with Bodega Canyon.

- A. Survey entire extent of sanctuary using sonar technology. Analyze information to develop fine-scale bathymetry maps, habitat maps, and submerged cultural resources. This information can be used in conjunction with biological surveys to produce habitat suitability models for selected species.
- B. Habitat maps created using sonar systems will be ground truthed using data collected by manned submersible, ROV, and Autonomous Underwater vehicle (AUV) surveys over high relief rocky regions of the sanctuary and towed camera systems and grabs over low relief unconsolidated substrates.
- C. Incorporate research findings into CBNMS education/outreach and management programs and messages.

STRATEGY CS-3: *Characterize the soft-bottom epifaunal communities of CBNMS.*

Epifauna are animals that live in contact with the sea bottom, either moving freely over the substrate or attached to it.

Activity 3.1 Survey the surface biota and sediment characteristics of the soft-sediment portion of the shelf and slope of CBNMS.

- A. Conduct survey of soft-bottom habitats of CBNMS. Survey will provide habitat assessment, estimates of distribution and abundance of epifauna, assessment of disturbance effects and marine debris, species list of invertebrates, and description of any submerged cultural resources.
- B. Results from this survey will be used to refine the habitat map.
- C. Create partnerships to continue monitoring epifaunal communities over time.

STRATEGY CS-4: *Characterize soft-bottom infaunal communities of CBNMS.*

Infauna are animals that live within or burrow through substrate.

Activity 4.1 Characterize the infaunal biota of the soft sediment portion of the shelf and slope of CBNMS.

- A. Conduct literature review to obtain current knowledge about infaunal communities. Relevant sources may be the United States Environmental Protection Agency (USEPA) status and trends information; Bureau of Ocean Energy Management (BOEM) reports; invertebrate collections made by NMFS/Northwest Fisheries Science Center (NWFSC) slope and shelf trawl surveys; and regional universities and research institutions.
- B. Conduct baseline survey of infaunal communities of CBNMS using bottom grabs. Survey should determine species diversity, distribution, and abundance, as well as describe characteristics of the sediment. Design sampling so that temporal variability of infaunal community can be assessed and correlated to changing oceanographic conditions.
- C. Utilize partnerships to continue monitoring infaunal communities over time.
- D. Use results to ground truth habitat map.

STRATEGY CS-5: *Collect, inventory, and catalog new and previously unsorted CBNMS benthic invertebrate specimens.*

Activity 5.1 Continue to populate voucher specimen database of benthic invertebrates from CBNMS; these specimens are maintained to provide permanent, physical documentation of species identifications and associated data resulting from inventories.

- A. Collections of CBNMS specimens at California Academy of Sciences (CAS) will be taxonomically upgraded, computer catalogued, and maintained by CAS as research specimens.
- B. Coordinate with CAS to maintain a computerized species list for CBNMS and provide the data to the sanctuary staff for future investigations.
- C. Target specimens of interest for subsequent identification, description, and future publication.
- D. Coordinate with CAS to identify and describe sponge species collected from CBNMS, including not-yet-described species.

Activity 5.2 Continue to collaborate with CAS on collection and identification of other CBNMS benthic invertebrates.

- A. Partner with CAS on future taxonomic identification, database maintenance, and expansion of specimen collection.

STRATEGY CS-6: Survey available museum collections, data archives, and literature indexing services for CBNMS specimens, data, and publications.

Activity 6.1 Conduct a literature, specimen, and data search to compile existing knowledge about Cordell Bank, and generate a verified species list. Methods should include:

- A. Search natural history museums and other collections for specimens collected from CBNMS.
- B. Search standard literature indexes for references to CBNMS. Secure regular access to Lexus-Nexus and/or other literature indexes for CBNMS.
- C. Search agency and academic electronic databases (i.e., metadata clearing houses) for data from CBNMS.
- D. Construct and maintain a verified species list and store in an easily accessible data repository (such as National Data Center or Sanctuary Integrated Monitoring Network [SIMoN]).

STRATEGY CS-7: *Understand the function and variability of pelagic ecosystems.*

Activity 7.1 Continue ACCESS with GFNMS and partners to quantitatively assess the distribution and abundance of marine birds, mammals, and sea turtles relative to ocean conditions, seasons, and biological productivity. This study provides long term data on production, populations, and trophic structure, and it will continue to support management.

- A. Physical oceanography will be described with data collected in the field and from remotely sensed data. Data will be collected on salinity and temperature at sea surface and at depth. Remote data will include upwelling indices, satellite images, and current information.
- B. Systematically survey along transect lines and record the presence of marine birds, mammals and sea turtles within CBNMS and GFNMS.
- C. Assess biological productivity by sampling zooplankton and phytoplankton using hydro-acoustics and net sampling.
- D. Use an echosounder to map the distribution of zooplankton and fish.
- E. Observe and document human activities within CBNMS and GFNMS.

STRATEGY CS-8: *Continue monitoring fish and invertebrate assemblages and marine debris in relation to the fine-scale habitat on and adjacent to the hard bottom areas of CBNMS.*

Activity 8.1 Perform submersible, ROV, or AUV field surveys (one- to three- year intervals) to monitor the distribution and abundance of fishes and invertebrates on and adjacent to the hard bottom areas. This project will include the following components:

- A. Assess and monitor distribution, abundance, and life history (size and maturity) of fishes around Cordell Bank and other hard bottom areas.
- B. Assess and monitor percent cover of invertebrates and distribution and abundance of specific macroinvertebrate species.
- C. Identify locations and quantity of derelict fishing gear and other benthic marine debris using submersible transects and video footage.
- D. Use video transects and rock grab samples to further characterize habitats identified by the sonar survey.
- E. Compare the biota of Cordell Bank with other deep reefs along the west coast (e.g., Bowie Seamount in British Columbia, Point Sur Bank in California, and Heceta Bank in Oregon).
- F. Determine the fish assemblages associated with different habitat types.

STRATEGY CS-9: *Continue to manage and store data in easily accessible and secure formats and locations. Data collected by CBNMS should be accessible to interested public and should be securely stored to prevent loss.*

Activity 9.1 Maintain handwritten records from research cruises. Records will be kept in the CBNMS office and the second set kept offsite. These records provide information that help (e.g., location, time) describe the sampling environment.

Activity 9.2 Electronic media collected on research cruises (files and tapes) will be copied and stored in the CBNMS office. Electronic media (files and video tapes) provide the detailed information (e.g., water temperature profiles, number of organisms observed).

Activity 9.3 Data obtained from laboratory analyses of video transects or plankton collections will be stored in a relational database, modeled after the National Park Service's (NPS's) Natural Resources Database Template. All electronic data are available to sanctuary staff through the CBNMS local area network. Since the relational databases comprise the core of the CBNMS research program, copies of the databases are housed on an off-site computer to guard against catastrophic loss.

Activity 9.4 Ensure data are compliant with federal standards for accessibility and quality, and formatted to be compatible with Federal Geospatial Data Center (FGDC) and other relevant agency initiatives (e.g., the Integrated Ocean Observing System [IOOS]).

STRATEGY CS-10: *Assess the role of Cordell Bank in the supply and receipt of fish larvae within the regional marine ecosystem by linking population genetics and oceanography.*

Activity 10.1 Determine the genetic make-up of adult, juvenile and larval populations of fish with pelagic larval stages within the Cordell Bank region relative to regional populations to understand levels of mixing and retention of early life history stages.

- A. Collect adult, juvenile, and larval stages of several common species with pelagic larvae from Cordell Bank as well as at multiple locations north and south of the Bank within the California Current System. Conduct genetic analyses on collected individuals to determine likely birthplaces of individuals.

Activity 10.2 Examine larval dispersal through simulations of coupled bio-physical models.

- A. Develop or modify an existing 3-D bio-physical simulation model to determine: 1) the geographic fate of larvae released from Cordell Bank; 2) the geographic origin of larvae that are likely to settle on Cordell Bank. Examine predicted dispersal patterns for larvae with different behavioral characteristics as well as larval periods. Examine predicted dispersal patterns given various oceanographic conditions.

STRATEGY CS-11: *Assess potential to conduct additional research activities in the future, when time and resources allow.*

Activity 11.1 Assess potential to conduct the following research activities, which originated from various sources including: 1) discussions of the Conservation Science working group that was assembled during the JMPR process; 2) comments received during the JMPR process; and 3) assessment report of the condition of CBNMS resources.

- A. Quantify Temporal Patterns of Gelatinous Zooplankton. Use of Tucker trawl or vertical haul sampling and acoustics to assess seasonal and interannual patterns of abundance and community composition of gelatinous zooplankton as part of the CBNMS pelagic monitoring program.
- B. Assess Primary Productivity within the CBNMS Ecosystem. Examine spatial and temporal variability in primary productivity and phytoplankton standing stock using simulated *in-situ* and photosynthesis-irradiance incubations coupled with satellite remote sensing data of ocean color.
- C. Directed Oceanographic Field Studies. Use of current meter arrays and acoustic Doppler current profiler to measure currents at different levels in the water column around Cordell Bank, drifters to track motion at and near the surface, and remotely-sensed observations from satellites to provide information on both local and regional conditions.

- D. Marine Mammal Observations Using Ships of Opportunity. Use of volunteer observers riding on ships of opportunity (e.g., wildlife viewing trips) to survey the distribution and abundance of marine mammals.
- E. Understanding the Emerging Role of Humboldt Squid in the CBNMS Ecosystem. Use of submersible or ROV to conduct surveys within CBNMS to acquire basic information on squid abundance and distribution. Use of hook and line sampling to assess squid foraging habits and diet.
- F. Geomorphology of Cordell Bank and Nearby Shelf and Slope Subsurface Geology. Collect sub-bottom profile data and synthesize with rock samples from Cordell Bank to summarize the subsurface geology and surficial geomorphology of the region.
- G. Water quality assessment. Assess potential environmental degradation of sanctuary waters arising from certain changing physical processes and anthropogenic inputs by reviewing and summarizing existing data sets to better understand the potential water quality threats to the sanctuary waters.
- H. Benthic contaminant assessment. Assess potential environmental degradation of benthic habitats and bottom dwelling species (as well as transfer further along the food chain) arising from concentrations of contaminants such as pesticides, hydrocarbons, and heavy metals by collecting and analyzing benthic samples.

CBNMS Conservation Science

Performance Measures

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
<p>Strategy CS-1: Prepare oceanographic climatology report.</p> <p>Strategy CS-2: Map and characterize habitats.</p> <p>Strategy CS-3: Characterize epifaunal communities.</p> <p>Strategy CS-4: Characterize infaunal communities.</p>	Increase our knowledge and understanding of the CBNMS ecosystem.	Characterize the habitats and communities of CBNMS.	Increased understanding of: oceanographic and atmospheric conditions; relative abundance and distribution of habitats; epifaunal and infaunal benthic communities.	Complete site characterization including: detailed oceanographic climatology; clear delineation of habitat types; use surface biota and soft bottom characteristics to ground truth habitat types; cross reference infaunal with habitat mapping to cross-reference results.	Sanctuary Superintendent, Research Coordinator, research partners	<p>1) Oceanographic climatology report with effective maps and graphics</p> <p>2) Fine scale bathymetric and habitat maps</p> <p>3) Technical data summary on infaunal and epifaunal communities</p>
<p>Strategy CS-5: Collect, inventory and catalog benthic invertebrate specimens.</p> <p>Strategy CS-6: Survey museum collections, data archives, and literature indexing for specimens.</p>	Increase our knowledge and understanding of the CBNMS ecosystem.	Characterize the habitats and communities of CBNMS.	Increase understanding of species diversity.	<p>1) Complete verified species inventory.</p> <p>2) Taxonomically upgrade, catalog, and maintain specimen collection.</p>	Sanctuary Superintendent, Research Coordinator, research partners	<p>1) Computerized voucher specimen database</p> <p>2) House invertebrate voucher specimens</p> <p>3) Confirmed species list</p>
Strategy CS-7: Characterize pelagic ecosystems.	Develop research programs to identify and address specific resource management issues.	Determine monitoring objectives and indicators and conduct a comprehensive monitoring program.	Increase understanding of oceanographic habitats and communities (short-term); and detect and evaluate impacts from anthropogenic or natural perturbations (long-term).	<p>1) Quantitatively assess the distribution and abundance of marine mammals and seabirds.</p> <p>2) Assess biological productivity (food) and assess human activity and oceanographic conditions. Cross-reference for correlation.</p>	Sanctuary Superintendent, Research Coordinator, advisory council research panel, research partners	<p>1) Technical data summaries</p> <p>2) Fine-scaled seasonal/annual distribution maps</p>

Conservation Science Action Plan
CBNMS Draft Management Plan

Strategy Title(s)	Performance Goal	Desired Outcome (Objective)	Outcome Measure	How Measured	Who Measures	Output Measure
Strategy CS-8: Maintain fish and invertebrate monitoring.	Maintain monitoring programs to understand long-term status and trends to guide management.	Characterize the habitats and communities of CBNMS.	Track changes to ecosystem over time and correlate to environmental conditions and to human use.	Characterize CBNMS habitats and characterize and monitor faunal communities, while identifying locations and quantities of anthropogenic impacts.	Sanctuary Superintendent, Research Coordinator, research partners	1) Technical data summary 2) Peer reviewed articles 3) Workshop presentations

KEY PARTNERS

GFNMS, MBNMS, NCCOS, NMFS (including its Santa Cruz Laboratory), National Weather Service (NWS), United States Geological Survey (USGS) Coastal and Marine Geology Program, CDFW, San Francisco State University (SFSU) Romberg – Tiburon Lab, BML, Moss Landing Marine Laboratories (MLML), PBCS, CAS, Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), Census of Marine Life, Cordell Expeditions, US Seabed, and a contractor.



ADMINISTRATION ACTION PLAN

PROGRAM STATEMENT

In order to build a management plan that is effective in addressing the priority site-specific and cross-cutting resource management issues, CBNMS will need to strengthen its infrastructure by adding staff and financial resources to its base budget. In addition to basic infrastructure needs, some administrative areas that will be addressed include: building partnerships; improving interagency coordination; and addressing regulatory and enforcement issues.

PROGRAM DESCRIPTION

At its designation in 1989, the operation and management of CBNMS was combined with that of the adjacent GFNMS, then known as the Point-Reyes Farallon Islands National Marine Sanctuary. In 1998, a separate budget was allocated to manage CBNMS independently of GFNMS and over the next few years additional staff were hired along with a sanctuary superintendent in 2003. In 2014, CBNMS has a staff of five federal employees and two contractors.

The ONMS provides oversight and coordination among a system of fourteen marine protected areas (thirteen national marine sanctuaries and Papahānaumokuākea National Marine Monument) by developing a framework for resource management, and directing program and policy development. The sanctuary superintendent oversees site-specific management functions including implementation of the management plan. The management plan makes use of two complementary and strategic tools for ecosystem management: (1) programs, or action plans, carried out through research, education, and marine resource protection programs, and (2) regulations for controlling or restricting human behavior that is not compatible with resource protection. The sanctuary superintendent establishes who is responsible for implementing specific programs, provides an administrative framework to ensure that all resource management activities are coordinated, and provides and manages an appropriate infrastructure to meet the goals and objectives of the management plan. The sanctuary superintendent reports to the ONMS West Coast Regional Director. The sanctuary superintendent represents the ONMS and is the primary spokesperson for CBNMS.

The ONMS is committed to coordinating with other federal, state, and local agencies in a continuous ecosystem management process. This process is designed to ensure the long-term protection of the unique resources of this region, while considering the demands of multi-use interests. Because of the complexity of managing the activities and resources in the sanctuary, cooperative efforts are necessary to effectively meet CBNMS goals. Overlapping jurisdictions,

different agency mandates, and limited resources necessitate the development of a management plan that brings together multiple institutions for the common purpose of ecosystem management. Achieving the long- and short-term goals for this region requires the development of close and continuing partnerships.

ADMINISTRATIVE STRUCTURE

Thirteen national marine sanctuaries and one marine national monument are managed by the ONMS. A management plan that is coordinated and consistent with the NMSA is prepared by ONMS for each site. The site superintendent monitors the effectiveness of the management plan, both regulations and programs, and may propose changes when necessary. The site superintendent coordinates efforts to protect and manage sanctuary resources with other federal, state, regional, and local agencies.

SANCTUARY SUPERINTENDENT

The CBNMS superintendent makes decisions on the annual allocation of funds for site-specific resource protection needs. The superintendent coordinates with regional staff on enforcement activities, violations, and emergencies. The superintendent also evaluates overall progress toward the resource protection objectives of the ONMS.

SANCTUARY STAFF

Under the direction of the sanctuary superintendent, the sanctuary staff is directly responsible for implementation of the management plan. Although each staff member is assigned to one of the program areas, collectively the staff is responsible for coordinating their efforts in addressing all the priority resource management issues.

SANCTUARY ADVISORY COUNCIL

The Sanctuary Advisory Council has been structured in accordance with the NMSA and national guidelines developed by the ONMS. The Sanctuary Advisory Council, with its expertise and broad based representation, offers advice to the sanctuary superintendent on resource management issues and decisions. The 2009 CBNMS Advisory Council Charter provides for seven nongovernmental representatives from stakeholder groups. They may have alternates. The Charter also provides for two non-voting governmental representatives and their alternates; the superintendent may sit on the Sanctuary Advisory Council as a non-voting member, as do the superintendents of GFNMS, MBNMS and Channel Islands National Marine Sanctuary. The Sanctuary Advisory Council is representative of a broad-based constituency to ensure that the superintendent has relevant information upon which to make management decisions. The Charter is reviewed for renewal every five years.

IMPLEMENTATION OF THE MANAGEMENT PLAN

Each of CBNMS's program areas—Education and Outreach; Conservation Science; and Resource Protection—has an associated action plan for implementing the management plan.

These action plans are designed to directly address resource management issues and guide management of CBNMS over the next five to ten years.

The action plans presented in the management plan address current resource management issues identified as priorities by the sanctuary staff during the management plan review process. The implementation of these action plans is highly dependent on available staffing and financial resource allocation.

CBNMS administration provides an organized structure and support system for implementing management strategies while providing the flexibility and guidance necessary to address changing, new, and emerging resource management issues.

OTHER MANAGEMENT TOOLS

With limited staff and financial resources, partnerships are an integral part of successful ecosystem management of CBNMS. The sanctuary superintendent may draw from a selection of standard management tools to formalize relationships with other federal, state and local agencies or the private sector. Examples of these agreements are a Memorandum of Understanding or Agreement, a Letter of Understanding or Agreement, an Interagency Agreement, a Cooperative Agreement, a grant, or a contract.

ADMINISTRATION GOAL

1. Build a strong foundation which supports the development of: effective program areas; a strong regulatory framework; effective enforcement, and an array of partnerships. This foundation will allow for growth and flexibility in addressing the priority issues and recommendations laid out in the management plan.

ADMINISTRATION OBJECTIVES

1. Develop a structured administrative framework to continuously evaluate, maintain, and expand as necessary, administrative operations.
2. Identify appropriate staffing, budget levels, and facility needs to support implementation of the management plan.
3. Continue to build on partnerships, collaborative efforts, and coordination with other agencies, institutions, and organizations.

ADMINISTRATION STRATEGIES

STRATEGY AD-1: *CBNMS will expand its facilities to include satellite offices, visitor centers, signage, and vessels located throughout the region as necessary to support implementation of the management plan.*

Additional CBNMS facilities may be developed through various partnerships with GFNMS, and the public and private sectors. Currently, CBNMS's main office is located in Bear Valley on the grounds of PRNS near Olema, California.

Activity 1.1 Increase presence in Bodega Bay, the nearest access point to CBNMS, by opening a satellite office and visitor center with GFNMS that would serve both research and outreach needs and assist in the further development of partnerships.

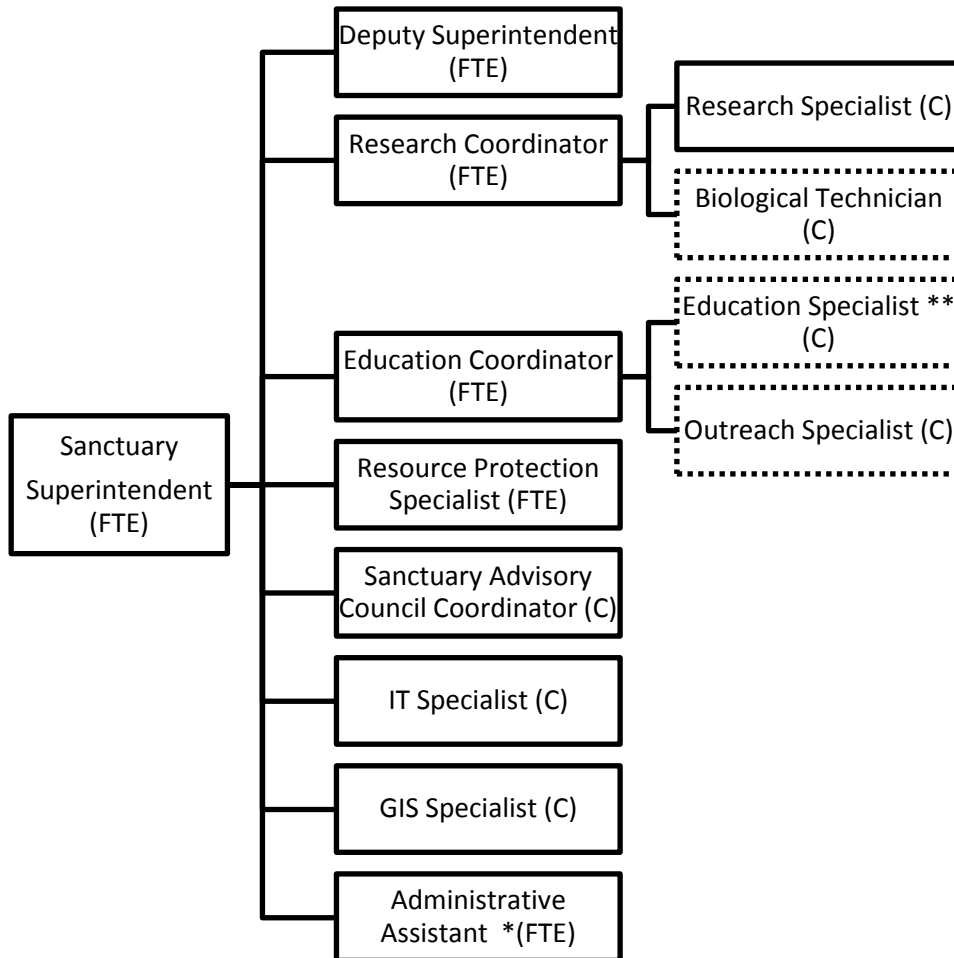
Activity 1.2 Work with the PRNS to identify intern/researcher housing options on park lands. These facilities may also include wet labs for researchers' use. Several possible sites (existing buildings) have been identified and preliminary investigations into potential partnerships are taking place. Formalized agreements may include CBNMS providing restoration and maintenance funds in return for use of the building(s).

Activity 1.3 Increase the sanctuary staff's ability to access the marine waters of the sanctuary by contracting more vessel time on the NOAA R/V FULMAR to support research and monitoring efforts. This effort will include annual vessel time planning for research and education programs. Vessel planning will include NOAA ship time and chartered boat time.

STRATEGY AD-2: *CBNMS will fill basic staffing requirements to provide support for administration and the program areas of conservation science, education and outreach, and resource management.*

Activity 2.1 CBNMS staff skills should collectively represent expertise in policy, marine resource management, education, outreach, volunteer development, research, monitoring, geographic information systems (GIS), information technology, and administration. The actual number and expertise of staff will depend on budget allocations and the operating priorities of CBNMS. In order to meet the objectives of this management plan, minimum staffing requirements have been proposed (see figure below).

Cordell Bank National Marine Sanctuary Proposed Staffing Plan



* Requires budget and finance experience

** Requires web page experience

FTE Full Time Equivalent Federal Employee

C Contractor

Existing Position

New Hire

Activity 2.2 Each staff member must exhibit general knowledge about all CBNMS program areas and the ability to effectively communicate with constituents, other professionals, and the community at large. In an effort to attract and maintain a consistent and high caliber staff base, the CBNMS superintendent will encourage and support staff participation in professional development.

STRATEGY AD-3: *With limited staff and financial resources, CBNMS will develop partnerships and identify outside funding sources and in-kind services to assist in the implementation of the management plan.*

Activity 3.1 In partnership with regional research and educational institutions and agencies, establish a CBNMS-supported internship program with graduate students to assist the sanctuary staff with monitoring, research, and education priorities.

Activity 3.2 Maintain and expand informal working relationship with federal, state, and local agencies. Partnership activities include coordination on education and outreach projects, research projects, data analysis, and cruise operations.

STRATEGY AD-4: *Support the Sanctuary Advisory Council in its primary roles of providing advice to the sanctuary superintendent and serving as a liaison between CBNMS and the sanctuary community.*

Activity 4.1 In consultation with the Sanctuary Advisory Council, strengthen the structure of the council by: evaluating and amending as necessary the Sanctuary Advisory Council charter; evaluating and developing organizational strategies to enhance the Sanctuary Advisory Council's level of participation and effectiveness; evaluating and adjusting, if necessary, Sanctuary Advisory Council membership; and providing support to help the Sanctuary Advisory Council develop a respected voice in the community.

Activity 4.2 Identify the role of the Sanctuary Advisory Council in addressing resource management issues by developing a format for assisting in the building of CBNMS policies and procedures.

Activity 4.3 Provide support, resources, and guidance to help the council engage and educate the public about current, new, and emerging resource management issues in the sanctuary.

Activity 4.4 Working groups will be convened by the Sanctuary Advisory Council, as needed, to focus on specific issues and to allow for participation by additional stakeholders and community experts.

STRATEGY AD-5: *CBNMS will formalize intra- and interagency partnerships to ensure coordination and cooperation with federal, state, and local jurisdictions within or adjacent to the sanctuary. NOAA and CBNMS recognize all other authorities in and around sanctuary waters as important components of effective ecosystem management.*

Activity 5.1 CBNMS will engage other agencies in reviewing each other's proposed actions, responding to Environmental Impact Statements, participating in CBNMS panels and working groups. Building agency relationships allows for: coordination of the development of policies at the federal, state and local level; the sharing of research and education resources; and the opportunity to work together to identify resource management issues.

Activity 5.2 CBNMS will formalize agreements with federal co-trustee managers signaling that the cooperative and integrated management approach established for CBNMS has been adopted by other agencies. To formally implement cooperative management of the sanctuary, a number of separate types of agreements may be entered into, including: cooperative agreements, memoranda of understanding, memoranda of agreement, and consultation.

Activity 5.3 CBNMS will formalize agreements for the following programs: (1) Protected Resources Enforcement Plan (USCG, NMFS, Sonoma County Sheriff's Department, CDFW); and (2) Emergency Response Plan (local, state and federal emergency response agencies). **STRATEGY AD-6:** *Develop and make use of performance indicators to measure effectiveness of the management of the sanctuary as a whole, as well as to evaluate specific strategies within the management plan.*

Performance Evaluation

As part of an effort to improve overall management of sanctuaries, ongoing and routine performance evaluation is a priority for the ONMS. Both site-specific and programmatic efforts are underway to better understand the CBNMS staff's ability to meet the objectives outlined in each of the action plans. Performance evaluation has many other benefits, including:

- Highlighting successful (or not so successful) efforts of site management;
- Keeping the public, Congress, and other interested parties apprised of sanctuary management effectiveness;
- Helping management identify resource gaps so that they may better manage their sites;
- Improving accountability;
- Improving communication among sites, stakeholders and the general public;
- Fostering the development of clear, concise and, whenever possible, measurable outcomes;
- Providing a means for superintendents to comprehensively evaluate their sites in both the short and long term;
- Fostering an internal focus on problem solving and improved performance;
- Providing additional support for the resource allocation process; and
- Motivating staff with clear policies and a focused direction.

Performance Evaluation Goal

1. Ensure that CBNMS's management plan strategies are producing effective results in addressing the priority resource management issues identified in the management plan.

Performance Evaluation Objectives

1. CBNMS will continuously measure and evaluate the successes and challenges of the strategies put forth in the five-year management plan.

2. Based on the outcome of these evaluations, CBNMS will modify existing programs and make recommendations for the future that best support the CBNMS primary objective of ecosystem protection.

Activity 6.1 CBNMS staff will conduct routine performance evaluations to collect and record data on CBNMS performance over time. Using this data, staff will determine the effectiveness of management plan strategies by (a) evaluating progress towards achievement of each action plan's desired outcomes and (b) assessing the role or added value of those outcomes in the overall accomplishment of site goals and objectives.

Activity 6.2 An annual assessment on the implementation of the CBNMS management plan will be conducted. This assessment will be conducted internally by CBNMS staff who will consider the progress and effectiveness of activities implemented over the previous year. In this activity, successes or weaknesses of specific activities will be determined. Activities deemed less than successful in achieving desired outcomes will be addressed to correct or improve the outcomes/outputs. Successful activities will be recognized with application of positive lessons learned to other programs.

Activity 6.3 Performance data will be generated from internal annual assessment and shared with advisory council to determine if management strategies need to be changed to better meet their stated targets. The targets themselves may also be analyzed to determine their validity (if, for instance, they are too ambitious or unrealistic given current site capacity to address during a particular year). This activity will be conducted with the management plan review which takes place every five to ten years.



CROSS-CUTTING ACTION PLANS CBNMS DRAFT MANAGEMENT PLAN

- I. Cross-Cutting Introduction**
- II. Administration and Operations**
- III. Community Outreach**
- IV. Ecosystem Monitoring**
- V. Maritime Heritage**

CROSS-CUTTING INTRODUCTION

Cordell Bank (CBNMS), Gulf of the Farallones (GFNMS), and Monterey Bay (MBNMS) National Marine Sanctuaries are located adjacent to one another along a 350-mile stretch of the north-central California coast. All three sanctuaries are managed by the Office of National Marine Sanctuaries (ONMS), share many of the same resources and issues, and have some overlapping interest and user groups. There are many opportunities for these sites to work cooperatively, share assets, and address resource management issues in a coordinated manner.

The three sanctuaries coordinate on many important resource management issues, such as oil spills and monitoring. However, each site is, for the most part, managed independently of the others. The three sanctuaries have separate advisory councils and independent education, research and resource protection programs.

In February 2004 ONMS established the Northern Management Area (NMA) of Monterey Bay National Marine Sanctuary extending from the San Mateo/Santa Cruz line northward to the existing boundary between Monterey Bay and Gulf of the Farallones sanctuaries. The Gulf of the Farallones assumed full administrative and management responsibilities of the NMA in March 2004. Existing Monterey Bay sanctuary regulations and congressional prohibitions apply in the Northern Management Area. MBNMS continues to manage its Water Quality Protection Program in San Mateo County. During the Joint Management Plan Review a Northern Management Area Transition Action Plan was developed and published in the 2008 management plans for the respective sanctuaries under the Cross-Cutting Action Plan. Many of the strategies have been implemented since the publication of the plan. Ongoing Strategies have been incorporated into this publication of the Cross-Cutting Action Plan.

GOALS

The goal of the cross-cutting action plans is to build upon existing coordination efforts and identify some activities that should be jointly implemented so that these three sites can operate as integrated and complementary sites to better protect the sanctuaries' resources. This will ensure scarce program resources are used more efficiently and result in a more consistent and coordinated delivery of programs, products and services to the public. Cross-cutting actions plans were developed to address: Administration and Operations; the Northern Management Area; Community Outreach; Maritime Heritage; and Ecosystem Monitoring. Though the implementation of other activities contained in the site-specific plans may also be effectively coordinated, the cross-cutting action plans would be jointly developed and implemented across the three sites.

IMPLEMENTATION WITHIN THE CONTEXT OF A REGIONAL STRUCTURE

ONMS efforts to address certain priority issues in a cross-cutting framework was a first step in a larger effort to begin looking at sanctuary resource management issues in a regional or ecosystem-based context. Since the cross-cutting plans were developed, the ONMS adopted a regional management structure, comprised of four regions, including a West Coast region, which is led by a regional director. The purpose of this structure is to maximize program integration among the ONMS sites, regions, and national program and to other state and federal programs and partners – across all levels. The regional structure dedicates program leadership and regional staff resources directly towards integrating programs and forging partnerships that supports NOAA’s evolving ecosystem-based management approach.

The regional director and staff are based in the region and dedicate their efforts towards addressing priority regional issues and capitalizing on regional opportunities and partnerships. Some of their expertise and responsibilities includes working closely with individual sanctuary staff to coordinate the implementation of certain cross-cutting action plans or projects, such as regional ecosystem monitoring, community outreach, or maritime heritage. Individual sanctuaries may also either take or share the lead for implementing the cross-cutting action plans.



ADMINISTRATION AND OPERATIONS CROSS-CUTTING ACTION PLAN

GOALS

The goals of the cross-cutting Administration and Operations Action Plan are to (1) improve and sustain coordination and cooperation across the three sanctuaries to better and more efficiently manage and protect sanctuary resources, and (2) for the individual sites to continue working and functioning as an integrated team. Fulfilling these goals for the three sanctuaries requires enhanced communication and collaboration among and between superintendents and program staff.

ISSUE DESCRIPTION

During scoping meetings for the JMPR, the ONMS received many comments relating to the need to coordinate various administration and operations across the sites. The three advisory councils and sanctuary staff identified several of these issues as priority items to address in the management plan review. These include:

- Improving resource management consistency and efficiency
- Expanding coordination and communication between sites and to the public
- Evaluating emergency response capabilities in the region, and clarify and coordinate the sanctuary's role in relation to other agencies
- Developing a mechanism to address current and emerging issues between the sites
- Coordinating research/monitoring, education/outreach, and enforcement activities

ADDRESSING THE ISSUE

Each of the three sanctuaries developed site-specific administration and operations action plans to address the staffing and infrastructure needed in order to implement their new management plans. In contrast, this cross-cutting administration and operations plan targets some activities that will be implemented by all three sites in order to improve communication and maximize their ability to collaborate and cooperate on many important resource management and program areas.

STRATEGY XAO-1: *Improve internal communications among the three sanctuaries.*

Successful collaboration and coordination among sanctuaries is related to the amount and intensity of communication. This strategy focuses on improving communications between the sites to ensure there are regular opportunities for the superintendents, staff and the advisory councils to learn what is happening at each of the three sites and jointly plan regional programs and activities.

Activity 1.1 Maintain regular communications between the sanctuary superintendents.

Superintendents will engage in informal (impromptu phone calls) and formal (regularly scheduled calls or meetings) communications. GFNMS and MBNMS superintendents will meet monthly by phone to discuss common issues.

Activity 1.2 The west coast superintendents will meet monthly by phone with the West Coast Region staff to discuss regional issues and will meet annually in person to develop annual regional priorities.

Activity 1.3 Maintain a new employee orientation program that includes information from the three sanctuaries and the ONMS.

If funding allows, the orientation program will include travel to the other sites to meet staff and learn about their program and activities. These efforts should be coordinated with similar efforts at headquarters.

Activity 1.4 The program coordinators will meet at least once per year to share information and plan joint activities prior to the development of the annual operating plans.

In cooperation with the regional office, the regional lead for each program will facilitate bringing this group together, either via conference call or in person if budgets allow.

Activity 1.5 Schedule annual joint advisory council chair and sanctuary superintendent meeting.

The MBNMS and GFNMS advisory councils currently meet biannually to discuss issues and program activities in the MBNMS NMA. GFNMS and CBNMS advisory councils will meet jointly on an annual basis to discuss the expansion area.

Activity 1.6 Encourage and provide opportunities for site staff to give presentations at each other's advisory council meetings.

Superintendents, council chairs and coordinators should encourage program staff presentations at each other's meetings.

STRATEGY XAO-2: *Improve the efficiency and cost-effectiveness of program operations and administration.*

Each of the three sanctuaries has been designated for over twenty years and during this time has accumulated an inventory of equipment, vessels and resources to support their own research/monitoring, education/outreach, and resource protection programs. This strategy recognizes there are instances in which it is more cost-effective to share resources among the sites and some instances when it may be more appropriate for each site to have their own. Currently each sanctuary office is responsible for managing most of its own administration and information technology functions, including contracts, procurements, time and attendance, travel orders and vouchers, websites, databases, and geographic information systems. Each site employs a varying number of staff or contractors to perform some of the administrative tasks. The goal of this strategy is to evaluate the staffing plans at the sites and maximize opportunities to share personnel and implement methods to make routine administrative functions more efficient. The strategy also highlights the importance of building upon existing efforts to share information technology resources.

Activity 2.1 Contact and inform the other sites early in the planning stages of field operations to provide opportunities to plan joint missions and to share information and data.

Individual sites may have program personnel, technology or information that would benefit the field operations of another site.

Activity 2.2 As opportunities arise, create short-term opportunities for staff exchanges, rotations, details and informal staff loans for specific projects or to fulfill on-going needs across the West Coast Region.

In addition to sharing valuable technical expertise, staff exchanges provide opportunities for professional development of program staff.

Activity 2.3 Participate in each other's interview panels to review candidates for new and vacant positions, where possible.

This is particularly important when hiring for positions that work with other sites on a regular basis.

Activity 2.4 Cordell Bank and Gulf of the Farallones superintendents and other planning staff will discuss administrative and operational needs and expectations related to the expansion area.

Staff will meet to determine needs and best opportunities for efficiency in addressing the management of the new expansion area. This relates to all programs, shared staffing, and budget allocation across the two sites.

Activity 2.5 Evaluate alternative management strategies for offshore portions of northern expansion areas.

GFNMS and CBNMS superintendents and WCRO will conduct a series of discussions regarding the most efficacious means to manage the offshore portions of the expanded areas of GFNMS and CBNMS, ensuring effective marine science, outreach and resource protection.

STRATEGY XAO-3: *Improve the coordination of sanctuary resource protection activities and programs.*

Each of the three site-specific management plans proposes various strategies to address their own resource protection programs (e.g., regulations/permitting, emerging issues, enforcement, emergency response). This strategy is aimed at improving the communication and coordination of resource protection activities across the three sites. The strategy addresses the need to improve staff understanding and awareness of all of the three sites' regulatory and permit processes and activities. Secondly, it establishes a process to identify and, when appropriate, jointly address emerging issues in a regional capacity. This includes coordination with local, state and other federal entities. Third, it recommends the development of a regional sanctuary emergency response plan so that the ONMS is better prepared to address emergencies on a regional scale. Finally, it identifies the need to comprehensively evaluate enforcement needs in relation to the new management plans and develop and implement a regional enforcement plan.

Activity 3.1 Improve staff awareness and understanding of each site's regulations.

Establish a basic and consistent understanding of each site's regulations. Ensure all staff have and are familiar with the portion of the WCRO web page which consolidates the management documents for the West Coast Region: regional regulations, terms of designation and management plans. Produce a table listing all regulations of West Coast sanctuaries.

Activity 3.2 The West Coast sanctuaries will continue to work closely on any future proposed regulatory changes that could affect other sites. The GFNMS and MBNMS Resource Protection Teams will closely coordinate on any future proposed regulatory changes that could impact the NMA.

Activity 3.3 GFNMS will facilitate a public process in the next five years to consider whether the San Francisco Exemption Area should be incorporated into the MBNMS.

Such an action would require changing the MBNMS regulations and designation document and require coordination with MBNMS staff, and approval from the MBNMS Superintendent. Public scoping for this process was initiated in 2012.

Activity 3.4 The West Coast sanctuaries will share responsibilities for preparing regional permits. GFNMS will be responsible for permit activities in the NMA.

West Coast sanctuaries will inform each other of any new permit applications or other activities that could affect any of the sanctuaries. GFNMS will process permits within the NMA, except for water quality permits, which will continue to be overseen by MBNMS.

Activity 3.5 MBNMS staff will continue to implement Water Quality Protection Program activities including conducting site water quality needs assessment, review water quality permits and authorizations.

MBNMS Water Quality staff will participate on Technical Advisory Committees that implement strategies within the WQPP Action Plans, implement volunteer water quality monitoring events including First Flush and Snapshot Day, review and comment on NPDES permits, respond to discharges entering the MBNMS NMA, coordinate and collaborate with partners participating in the Agriculture Water Quality Alliance, and oversee monitoring of Areas of Special Biological Significance in a sub-contract to the San Mateo Resource Conservation District.

Activity 3.6 Coordinate emerging issues among the West Coast sanctuaries and develop coordinated strategies to address emerging issues

As an individual site staff identifies emerging issues, staff members will determine the significance and potential to impact another site, and communicate this to the potentially affected site(s). They will jointly determine if a new or emerging issue needs action and identify a strategy and activities to address the issue, depending on whether it is an immediate or long-term threat, what is (or is not) known about it, and if there are adequate resources to address it properly.

Activity 3.7 Implement West Coast Region emergency response plan.

The West Coast Region emergency response plan addresses broad emergency response issues that affect the region, identifies ONMS staffing responsibilities and expertise, and outlines how the ONMS will coordinate with existing federal, state and local emergency response agencies in California. GFNMS staff will lead efforts to coordinate and implement site-specific activities to respond to emergencies in the NMA.

Activity 3.8 Coordinate with the ONMS Damage Assessment Team on populating and making the Sanctuary Hazardous Incident Emergency Logistics Database System (SHIELDS) functional and operative for the three sanctuaries and integrating it with the existing SIMoN database.

Activity 3.9 Continue to work closely on enforcement activities in the region.

Regional enforcement staff will coordinate and cooperate on enforcement activities as they relate to other sites. GFNMS staff will provide assistance as appropriate in the planning and implementation of enforcement activities in the NMA and will coordinate with MBNMS to ensure consistency across sites.

TABLE XAO-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING ADMINISTRATION & OPERATIONS ACTION PLAN

Desired Outcome(s) For This Action Plan:	
Improved communication and coordination among Sanctuary staff resulting in more integrated and coordinated resource protection for Sanctuary resources.	
Performance Measures	Explanation
Increase the number of cross-cutting Annual Operating Plan (AOP) activities that each site includes in their site-specific AOP each year.	One of the primary purposes of this action plan is to increase the amount of communication and interaction among the three sites. This action plan identifies specific opportunities for staff to interact, resulting in more coordinated planning and implementation of joint activities that address priority issues. The tangible results of these interactions will be formulated within each site's AOP.

KEY PARTNERS

CBNMS, GFNMS, and MBNMS (superintendents, program coordinators, and site staff); Advisory Councils Chairs for CBNMS, GFNMS, and MBNMS; General Council Ocean Service (GCOS); NOAA OLE; NOAA General Counsel Enforcement Section (GCES); NOAA Hazardous Materials (HAZMAT); United State Coast Guard (USCG); National Park Service (NPS); California State Parks; California Department of Fish & Wildlife; California State Lands Commission (CSLC); and County Sheriff Departments.



COMMUNITY OUTREACH CROSS-CUTTING ACTION PLAN

GOAL

A coordinated, collaborative regional community outreach strategy will build awareness throughout north-central California and beyond about (1) the existence and purpose of the three sanctuaries, the West Coast region, and the ONMS; (2) the diverse natural resources and ecosystems of each sanctuary and why they need protection; (3) the relevance of these ecosystems to people; (4) the economic and intrinsic value of the three sanctuaries to coastal and inland communities beyond such direct industries as fishing and ecotourism; (5) how these three sanctuaries are working with constituent groups; and (6) how individuals and groups can be engaged in helping the sanctuaries accomplish their resource protection, research, and education goals.

ISSUE DESCRIPTION

Under the ONMS, each sanctuary in the system conducts education and outreach activities to build broad public awareness about the existence and purpose of our nation's marine sanctuaries. The ONMS recognizes a well-informed local, regional, and national constituency greatly enhances the ability of the sanctuaries to protect their natural and cultural resources. Therefore, outreach activities should provide local and state governments, businesses, non-governmental organizations, constituent groups, and the general public with the information necessary to be effective partners in the stewardship of sanctuary resources.

This cross-cutting action plan identifies appropriate regional audiences and topics, regional outreach strategies, and marketing and media exposure efforts that effectively highlight specific program activities across all three sites, the region and the national system. It is also designed to complement each site-specific program and to be flexible enough to incorporate new strategies and topics over time.

Effective community outreach is accomplished through a continuous cycle of ocean and coastal outreach, education, and stewardship. Community outreach expands awareness, knowledge and ultimately changes attitudes and behaviors. By finding information on ocean and coastal resources, and stewardship opportunities in which to get involved in the sanctuary, people begin to have a personal relationship with the sanctuary and may be more likely to become ambassadors helping to protect sanctuary resources. Community outreach involves three

strategies tailored to the specific needs and interests of a given audience and may be delivered by members of that audience.

Outreach provides audiences with sanctuary-related information and materials promoting ocean and coastal stewardship.

Education provides fundamental scientific understanding, knowledge, training, or professional development on topics relevant to the world's atmosphere, climate, oceans and coastal ecosystems, and resource protection.

Stewardship is a personal sense of responsibility to take informed action and make caring choices, at home or work, which promote and protect the health of our coasts and oceans.

STRATEGY XCO-1: *Build upon and expand existing ocean and coastal outreach*

This strategy is aimed at raising general awareness of marine ecosystems, individual national marine sanctuaries and the national marine sanctuary system, and inspiring stewardship of ocean and coastal resources. Outreach provides audiences with sanctuary-related information and materials based on NOAA science, products, and services that promote ocean and coastal stewardship. These audiences may be: north-central California coastal residents; people who live and work in inland California communities that regularly visit the ocean, such as divers, kayakers, tidepoolers, etc.; those who make their living within the ocean environment, like fishermen, maritime shipping companies, etc.; or people who live outside California that care about the ocean even though they may never visit. These, and others, are important voices in the protection and stewardship of the oceans. Key target audiences and messages should also be closely coordinated with outreach needs identified in the issue-related action plans.

Activity 1.1 Develop or strengthen coordinated regional outreach programs and opportunities.

Outreach staff should coordinate on public service announcements, issue-specific workshops and brochures (e.g., tide pool etiquette), docent programs, signage, learning centers, exhibits and displays at community events that encompass or represent the region.

Activity 1.2 Plan and conduct regional sanctuary outreach events.

Outreach staff should promote the importance of national marine sanctuaries, conservation science and resource protection programs, working together to improve understanding of marine conservation and management.

Activity 1.3 Develop and implement joint media communications plan, e.g., print, radio, TV, Internet.

Media personnel at respective sites should coordinate with the WCRO media liaison to develop a plan.

Activity 1.4 Identify and partner with external programs and partners to incorporate sanctuary-related messages, identify best practices and achieve common goals.

Regional outreach personnel should work together to target partners and programs that can effectively communicate ONMS messages on a regional level, and assign appropriate leads to initiate contact and follow-up.

STRATEGY XCO-2: *Enhance and coordinate ocean and coastal education*

This strategy focuses on building community knowledge and fostering caring actions and attitudes targeting priority issues identified in the management plans. The ONMS's joint ocean and coastal education efforts provide a fundamental understanding grounded in science, knowledge, training, and/or professional development to a particular audience on topics identified as important to protect sanctuary resources. There are many possible audiences such as students, teachers, state and local agencies, community leaders, and the general public. Sanctuary-related educational activities are based on NOAA science, systematic in design with clear goals, objectives and measurable outcomes; aligned, where appropriate, with state or national education standards; and designed to facilitate evaluation by a third party.

Activity 2.1 Collaborate on existing site-specific education programs and products as a means to enhance and expand educational offerings.

Each year, the education staff will jointly meet to identify collaborative projects for inclusion in their respective AOPs.

Activity 2.2 Take a multicultural/multilingual approach to all outreach efforts.

Assess demographics of geographic areas with programming and ensure multicultural relevance to diverse audiences. Develop multicultural educational curricula and materials in response to demographic assessment.

Activity 2.3 Identify and implement new education programs that can be developed jointly with other sites.

Education leads should identify and implement new programs as needs arise and as budgets allow.

STRATEGY XCO-3: *Enhance ocean and coastal stewardship*

Marine sanctuary stewardship is a personal sense of responsibility to take informed action and make caring choices, at home or work, which promote and protect the health of our coasts and oceans. A steward develops attitudes, motivations, and commitments that are reflected in informed decisions and responsible actions. Stewards can be individuals, members of groups, or entities that influence others' opinions and actions about the oceans. Stewardship can be demonstrated through a variety of means, including:

Volunteering for an organized stewardship program,
Taking personal action to protect our ocean sanctuaries,
Providing informed public input into decisions regarding the sanctuaries, and
Informing others regarding marine ecosystems and the sanctuary program.

Similar to the audiences for outreach, ocean and coastal stewards may be north-central California coastal residents, people who live and work in inland California communities that regularly visit the ocean, those who make their living within the ocean environment, or people who care about the ocean even though they may never visit.

Activity 3.1 Create, maintain and promote sanctuary and partner volunteer programs.

Cultivate volunteers to provide opportunities for stewardship as well as expand resource protection, education, and outreach capabilities of the three sanctuaries.

Activity 3.2 Create new ways to inspire coastal and ocean stewardship in local communities.

The three sites will conduct needs assessments with targeted constituents and audiences to identify innovative and creative methods of engaging specific groups of people in sanctuary activities. Some examples include working with tourism industry, faith-based or cultural organizations, retired citizens or local art groups.

Activity 3.3 Identify partners to incorporate stewardship messages.

Regional outreach personnel should work together to target partners that can effectively communicate ONMS stewardship messages, and assign appropriate leads to initiate contact and follow-up.

Table XCO-1: Measuring Performance of the Cross-Cutting Community Outreach Action Plan

Desired Outcome(s) For This Action Plan:	
Expand joint education and outreach efforts in a manner enhancing protection for Sanctuary resources and the delivery of programs and services to local communities.	
Performance Measures	Explanation
Increase the number of joint education and outreach efforts directed at communities	One of the main purposes of this action plan is to expand general awareness of the three sanctuaries, develop joint education products addressing priority issues, and increase involvement of individuals in the stewardship of the resources in the three sanctuaries. Some of the programs directed at local communities include schools and teachers, volunteers, fairs and festivals, visitor centers, public lecture series, etc.

KEY PARTNERS

CBNMS, GFNMS, MBNMS, CINMS, OCNMS, West Coast Region Office, NMFS, NOAA OLE, USCG, NPS, USEPA, California Coastal Monument, other federal agencies, California State Parks, Elkhorn Slough National Estuarine Research Reserve, other state agencies, Association of Monterey Bay Area Governments, Association of (SF) Bay Area Governments, Sonoma County Regional Parks, cities, local parks/recreation departments, Advisory council members from all three sanctuaries/working groups, FMSA, Monterey Bay and Channel Islands Sanctuary Foundation, Stewards of Coast and Redwoods, Fort Ross Conservancy, local NGOs/non-profits, Save Our Shores, The JASON Project, SIMoN, Community Outreach Working Group, Snapshot Day Water Quality Monitoring Event, Long-term Monitoring Program and Experiential Training for Students (LiMPETS), Beach Watch, Beach Coastal Ocean Mammal/Bird Educational and Research Survey (Beach COMBERS), MBNMS Team Ocean Conservation Education Action Network (OCEAN), Global Learning and Observation to Benefit the Environment (GLOBE), Bay Net, traditional and electronic media (both coastal and inland, local and national, including local weekly papers, community access TV stations, social media), California Ocean Communicators Alliance (Thank You Ocean), pollution prevention programs, chambers of commerce, shipping trade associations, tourism trade associations, dive clubs/shops, kayak clubs/shops, spot abalone divers, other recreational groups, natural history museums, institutions with community service requirements/marine sciences (high schools, colleges), state/local volunteer programs, high school/college classes doing coastal monitoring, multicultural community leaders, and bilingual school programs.



ECOSYSTEM MONITORING CROSS-CUTTING ACTION PLAN

GOALS

The cross-cutting goal of coordinated ecosystem monitoring across CBNMS, GFNMS and MBNMS is to better (1) determine the current and anticipate the future status of sanctuary resources; (2) understand the limits of variation in resources; (3) detect temporal and spatial changes in resources; (4) identify potential agents of change; and (5) provide scientific information that can guide management decisions on priority issues.

INTRODUCTION

One of the express purposes and policies of the National Marine Sanctuaries Act is that long-term monitoring of sanctuary resources be supported, promoted, and coordinated (16 U.S.C. 1431). Sanctuaries also promote data collection to assess resource or environmental change with respect to implemented management actions. The suite of monitoring information required by sanctuary management includes data from within the sanctuary and from areas outside the boundaries that influence sanctuary waters.

For the most part, individual sanctuaries work independently to develop monitoring programs and partnerships to inform their management concerns. These programs typically rely on substantial support from other government, private, and academic institutions at the federal, state, and local levels. The program designs are often only indirectly influenced by sanctuary management responsibilities.

Undertaking ecosystem monitoring requires long-term comprehensive assessments and broad scale integration of data collected in a wide variety of habitats (e.g., coastal interface, subtidal, continental shelf, shelf break, and deep water) and in areas that directly influence them (e.g., watershed, estuaries, coastal currents). Such assessments and integration can only be achieved through coordination with multiple partners focused on a variety of resources and geographic scales. Because the three sanctuaries of Cordell Bank, Gulf of the Farallones, and Monterey Bay have contiguous boundaries, they protect and manage many of the same habitats types and living resources, some of which range throughout the combined area. As such, the sanctuaries should consider each other as primary partners in monitoring efforts to evaluate the status and trends of these shared resources. Coordination among the three sanctuaries to promote, conduct, integrate, and synthesize data from ecosystem monitoring activities is the most effective and efficient

means to improve availability of information for resource conservation and management across the region.

The combined areas of CBNMS, GFNMS and MBNMS also represent a substantial portion of California coastal waters. Regional sanctuary monitoring coordination across this extensive area will help promote sanctuary management concerns as a driver for large-scale monitoring initiatives and partnerships. The data collected from coordinated efforts will be useful at the local and regional scale, with the potential for influencing resource management actions throughout a substantial portion of the West Coast.

ADDRESSING THE ISSUE

Most of the monitoring data that informs sanctuary management are not financed, collected, or analyzed by the sanctuaries. Instead, sanctuaries support and promote these activities indirectly by providing vessel time, staff support, and equipment, and coordinating the interests and information of outside agencies and partners. They also assist in securing outside funding that can be directed toward projects that address sanctuary information needs such as SIMoN.

Indirect support is appropriate to enhance capacities of the sanctuary programs to meet the mandate of resource protection. Such expertise to collect and analyze the variety of information required for management needs is accessible through partnerships with various research institutions. However, effective resource management requires a holistic view, which sanctuaries are uniquely positioned to achieve. To meet their resource management mandate, sanctuaries must synthesize and integrate information from disparate research and monitoring projects. They have the further responsibility of interpreting and applying available scientific knowledge for resource managers and the public. Thus, coordination of ecosystem monitoring efforts requires strategic action on various sanctuary-specific programmatic levels.

Recommended strategies focus on coordinating existing activities, identifying opportunities for additional coordination, and establishing the administrative infrastructure, advisory panels, and oversight mechanisms required to support, direct, and evaluate coordinated monitoring across the three sanctuaries. Because many of the monitoring requirements common to CBNMS, GFNMS, and MBNMS overlap with the interests of CINMS and OCNMS, the strategies recommended in this proposed action plan should serve as a model for expanded coordination of appropriate monitoring activities across all five of the West Coast sanctuaries. The strategies are also consistent with efforts of the System Wide Monitoring Program (SWiM) to improve collection, evaluation, and interpretation of monitoring information throughout the sanctuaries. Thus, these activities promote system and regional integration across the program as well as improving ecosystem conservation and management in the combined area of the three sanctuaries.

STRATEGY XEM-1: Coordinate existing targeted monitoring activities to promote greater efficiency and effectiveness.

Priority activities for initiation of joint ecosystem monitoring within the region should be focused on the coordination of existing sanctuary-specific monitoring programs that assess

similar ecosystems in at least two of the three sanctuaries. This includes coordinating targeted programs that monitor conditions in the coastal interface and the pelagic/offshore systems.

These priorities are based on the need to establish common ecological monitoring efforts throughout the region and the priority issue areas identified in the management plan that could best be addressed through a coordinated approach among the sanctuaries. Some of the priority habitats that have been identified for joint monitoring include: rocky intertidal shores, deep sea benthos and pelagic/open ocean. The coordination channels and activities established to support these targeted efforts could serve as a model for additional monitoring coordination in the future. Other existing or newly emerging monitoring activities, not identified in this action plan, represent potential opportunities for additional coordination. Assessment of such opportunities is addressed in Strategies XEM-2 and XEM-3.

Activity 1.1 Regional science staff should coordinate regarding intertidal monitoring programs.

Coordinate individual sanctuary rocky intertidal monitoring programs and continue to collaborate with other large-scale rocky intertidal monitoring efforts, such as PISCO and MARiNe.

Activity 1.2 Beach Watch and Beach COMBERS will continue to collaborate on sharing information on the health of seabirds and trends in beachcast wildlife.

GFNMS Beach Watch staff should evaluate the feasibility of expanding existing citizen science monitoring in the expansion area.

Activity 1.3 Maintain and expand ACCESS integrated sanctuary marine mammal, seabird and sea turtle surveys.

CBNMS and GFNMS science staff should evaluate the feasibility of expanding existing at-sea monitoring to the expansion area.

Activity 1.4 Regional science staff should coordinate regarding benthic habitat surveys.

Jointly develop research cruise plans and standards for sampling and reporting results for benthic habitat survey work. Augment the benthic habitat survey work with new technologies such as ROV and AUV surveys.

STRATEGY XEM-2: *Implement existing regional ecosystem monitoring activities.*

Over the last decade, many federal and state agencies have actively participated in collaborative efforts to develop and implement integrated coastal and ocean observing and data management systems. To further these efforts, the ONMS, and many individual sanctuaries, have been working closely with their partners to build upon and integrate existing site monitoring programs into regional ecosystem monitoring programs. The following activities have been identified as

pilot programs within the ONMS to test the concept of integrating observation data and making it available to resource managers and the public.

Activity 2.1 Continue the West Coast Observation Project at CBNMS, GFNMS and MBNMS.

The West Coast Observation Project integrates ocean observation data collected at OCNMS, CBNMS, GFNMS and CINMS. The project focuses on data streams collected at numerous new instrument moorings installed at specific locations within each of the four sanctuaries. The project intends to make the monitoring data accessible via the Internet in an IOOS compatible format. The data from this project would be best shared through the Central and Northern California Ocean Observing System (CeNCOOS).

Activity 2.2 Develop and implement an integrated Sanctuary System-Wide Monitoring (SWiM) program for CBNMS, GFNMS and MBNMS by publishing Condition Reports and collaborating with CeNCOOS.

The primary purpose of the SWiM program is to monitor specific ecological parameters of the sanctuary and ensure the timely flow of data and information to those responsible for managing and protecting resources in the ocean and coastal zone, and to those that use, depend on, and study the ecosystems encompassed by the sanctuaries. It also provides a reporting strategy, through Condition Reports, to enable the evaluation of status and trends in protected resources and activities that affect them. These efforts will be integrated with SIMoN, which implements the monitoring, coordinates with partners, and provides GIS, Web and other products that allow for local and regional information sharing, as well as through CeNCOOS.

Activity 2.3 Continue expanding the Sanctuary Integrated Monitoring Network (SIMoN).

SIMoN is the primary mechanism to coordinate data and information among the sites. CB, GF and MBNMS have their monitoring projects summarized with available data and images on the SIMoN website. This information is linked to the National Program monitoring summary. Joint interactive maps, images and “what’s new” items are also available. Project information and new cross site tools will continue to be developed as needed.

Activity 2.4 Look for partnerships to support ecosystem monitoring.

Collaborate with NMFS on the California Current Integrated Ecosystem Assessment and integrate this into SIMoN ecosystem assessments.

Activity 2.5 Look for innovative ways to support ecosystem monitoring.

Evaluate and identify ongoing funding opportunities to support regional and larger scale ongoing monitoring activities.

STRATEGY XEM-3: *Establish a joint internal monitoring coordination team.*

Coordination of monitoring activities among the sanctuaries requires an administrative infrastructure to identify and act on cross-boundary opportunities, collaborate with large-scale initiatives, and interpret the results for resource managers and public audiences across the region.

Activity 3.1 Continue to coordinate research and monitoring across CBNMS, GFNMS and MBNMS.

CBNMS, GFNMS, and MBNMS coordinate on the use of the research vessel FULMAR. In addition, GFNMS and CBNMS coordinate and partner on offshore monitoring which includes the NMA. Finally, monitoring information from all sites is shared through the SIMoN web page and interactive maps.

Activity 3.2 The CBNMS, GFNMS, and MBNMS science staff will continue to work jointly with the site and West Coast Region media staff to develop a research and communications plan

Activity 3.3 Develop annual ecosystem-based research and monitoring operating plans in collaboration with each other to meet site, regional, and national monitoring needs. CBNMS, GFNMS and MBNMS science staff should share research and monitoring information between sites as annual operating plans are developed.

TABLE XEM-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING ECOSYSTEM MONITORING ACTION PLAN

Desired Outcome(s) For This Action Plan:	
Increased collaboration among, capacity of, and productivity of the three sanctuary monitoring programs in order to enhance our understanding of the ecosystem(s) in this region and those natural and human factors affecting them.	
Performance Measures	Explanation
<p>1. Increase the number of cooperative research and monitoring activities.</p> <p>2. Continue to include Cordell Bank and Gulf of the Farallones in SIMoN and expand its infrastructure so that it can be integrated with other coastal and ocean observation systems along the West Coast.</p> <p>3. Design and implement coordinated monitoring programs consistent with the ONMS System Wide Monitoring Framework (SWiM) at each site.</p>	<p>1. Research staff from the three sanctuaries currently engage in limited joint research and monitoring activities. However, to improve our knowledge and understanding about the broader ecosystem in this region, the three sites need to coordinate and systematically plan and implement joint research and monitoring activities with each other and other partners. These new joint research and monitoring activities will be reflected in each sites' AOP.</p> <p>2. SIMoN is rapidly evolving into a system-wide tool for organizing and displaying research and monitoring related information for MBNMS, GFNMS, and CBNMS. In addition, SIMoN has evolved so other regional coastal and ocean observation systems could be integrated within SIMoN.</p> <p>3. The ONMS has been working for several years to develop a System Wide Monitoring (SWiM) Program Framework. The program is underway and ready to be implemented at MBNMS, GFNMS, and CBNMS, particularly through Condition Reports..</p>

KEY PARTNERS

CBNMS, GFNMS, MBNMS, CINMS, OCNMS, WCR), NCCOS, NMFS, NESDIS, National Coastal Data Development Center (NCDDC), National Oceanographic Data Center (NODC), National Data Buoy Center (NDBC), NOAA National Estuarine Research Reserve System (NERRS), advisory councils, NPS, USEPA, USFWS, BOEM, USGS, BML, University of California-Santa Cruz (UCSC), State of California, Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), Multi-Agency Rocky Intertidal Network (MARINe), Southern California Coastal Water Research Project Authority (SCCWRP), Tenera Inc., Kinetic Labs, Inc., SIMoN, Coastal Observation and Seabird Survey Team (COASST), California Cooperative Oceanic Fisheries Investigations (CalCOFI), Monterey Bay Aquarium Research Institute (MBARI), Alliance for California Current Ecosystem Observation (ACCEO), NCDFW, Ocean-US, SWiM, Southeast Area Monitoring and Assessment Program (SEAMAP), Integrated Ocean

Observing System (IOOS), CeNCOOS, MBNMS RAP, CBNMS RAP, FMSA, Monterey Bay and Channel Islands Sanctuary Foundation, and PRCS.



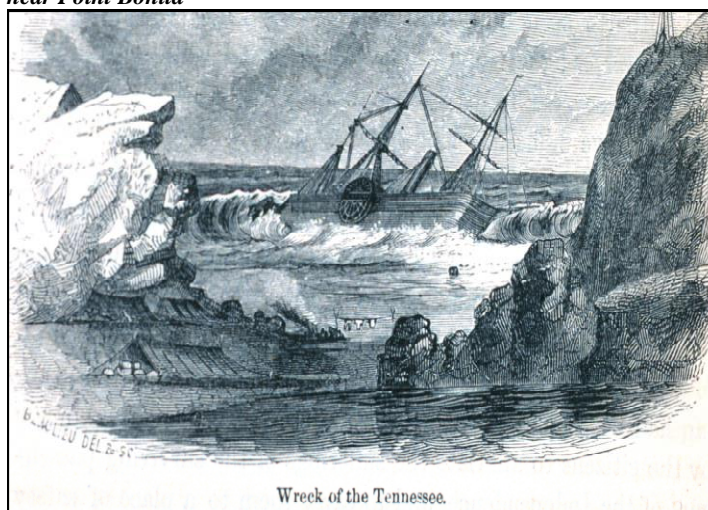
MARITIME HERITAGE CROSS-CUTTING ACTION PLAN

GOALS

The ONMS has developed the Maritime Heritage Program (MHP), to identify, protect and raise awareness of the cultural and historical resources in sanctuaries. The MHP's efforts include conducting paleo-ecological and archaeological studies; inventorying, locating, and monitoring both historic shipwrecks and those that pose an environmental threat to sanctuary marine resources; and characterizing and protecting maritime heritage resources.

This cross-cutting plan provides the framework for a maritime heritage resources program that addresses historic and cultural underwater sites, as well as traditional heritage resources such as Native American and fishing communities, commercial marine transport of passengers and cargo, and recreational activities like diving, surfing, and boating. This maritime cultural landscape of the region involves understanding the broader context of specific places that encompasses human activities. This includes indigenous people of our nation's pre-historic and historic past as well as today's modern cultures and their sacred places; geography; paleontology; archaeology; traditional knowledge and sociocultural studies; oral traditions; commercial and recreational fisheries; recreation activities, maritime heritage resources such as lighthouses, piers, wharves, lifesaving stations, abandoned dog-hole ports and landings and working waterfronts, revealing the many human communities that overlap with marine environments in our national marine sanctuaries and contiguous waters. Although the ONMS only has authority to protect sanctuary cultural and historic resources, the program recognizes that traditional user and ocean-dependent groups are interconnected with the sanctuaries and are an integral part of their history.

Figure MH-1: The passenger-cargo steamer Tennessee runs aground near Point Bonita



ISSUE DESCRIPTION

The NMSA and site regulations mandate the management and protection of sanctuary cultural and historical resources. Cultural resources are defined as any historical or cultural feature, including archaeological sites, historic structures, shipwrecks, and artifacts. *Historical resources* are defined as any resources possessing historical, cultural, archaeological or paleontological significance, including sites, contextual information, structures, districts, and objects significantly associated with or representative of earlier people, cultures, maritime heritage, and human activities and events. Historical resources include “submerged cultural resources,” and also include “historical properties,” as defined in the National Historic Preservation Act (NHPA), as amended, and its implementing regulations, as amended.

The area encompassed by CBNMS, GFNMS, and MBNMS has a long and interesting maritime history. The sea floor preserves remnants of the sites where people lived and of the vessels in which they conducted trade and fought wars. Ships, boats, wharves, lighthouses, lifesaving stations, fort, dog-hole ports, whaling stations, prehistoric sites, and a myriad of other heritage treasures lie covered by water, sand, and time in GFNMS and MBNMS. To date, no submerged cultural or historic resources have been discovered in CBNMS.

The history of California’s north-central coast is predominantly a maritime one. From the days of the early Ohlone, Coast Miwok, and *Kashia* Pomo inhabitants to the exploration and settlement of California to the present, coastal waterways remain a main route of travel, subsistence, and supply. The heritage of the first peoples has been and is today represented not only in the sites of former settlements but also by the traditions and heritage of those people, who have persisted as important members of the coastal community. Their place names, their memories and their traditions remain on these shores and waters whether written on a map or not.

Ocean-based commerce and industries (e.g., fisheries, shipping, military, recreation, tourism, extractive industries, exploration, research, and aesthetics) are important to the maritime history, the modern economy, and the social character of this region. These constantly changing human uses define the maritime cultural landscape of these sanctuaries and help interpret our evolving relationship with the sanctuary resources. Ports such as San Francisco and Monterey, and smaller coastal harbor towns, developed through fishing, shipping, and economic exchange. Today these have become major urban areas, bringing millions of people in proximity to national marine sanctuaries. Many of these people are connected to the sanctuaries through commercial and recreational activities such as surfing, boating, and diving.

Records indicate that 787 vessel and aircraft losses were documented between 1595 and 2013 along California’s north-central coast from Cambria north to Manchester, including the Farallon Islands. To date, 392 in GFNMS, 395 in MBNMS, and none in CBNMS have been documented. Some sites have been located and inventoried by NOAA and the NPS. Although some vessels were later salvaged or refloated, some artifacts associated with wrecking events may still exist. GFNMS and MBNMS have also collaborated with state and federal agencies,

and the private sector to gather resource documentation and to create opportunities to locate and record submerged archaeological resources. GFNMS and MBNMS maintains shipwreck inventories, created from established shipwreck databases, ongoing historical research and field surveys. GFNMS and MBNMS are also faced with the challenge of identifying and monitoring historic and non-historic shipwrecks posing environmental threats to sanctuary marine resources. Lurking in the deep are the hazardous cargoes, abandoned fuel, and unexploded ordnance inside sunken vessels that are slowly deteriorating in a corrosive marine environment.

Submerged Site Inventory and Assessment Initiative

ONMS regulations mandate that archaeological resources are managed consistently with the Federal Archaeological Program. The ONMS's MHP was established to emphasize the need for research, education, outreach, and protection of maritime heritage resources. Issues to be addressed regarding inventorying, assessing, and protecting submerged archaeological are below..

Shipwrecks as Environmental Threats

GFNMS and MBNMS both coordinate with the Damage Assessment Restoration Fund and other relevant agencies. GFNMS and MBNMS will work with CINMS to expand their efforts to identify shipwrecks that may pose environmental threats and will provide pertinent information to NOAA's Hazardous Materials (HAZMAT) division and the NMSP for development of the Sanctuaries Hazardous Incident Emergency Logistics Database System (SHIELDS) and the Resources and Under Sea Threats (RUST) Geographic Information Systems (GIS) database systems.

Site Protection

As submerged shipwreck sites are inventoried in the sanctuaries and become more visible to the public, they are also more at risk from divers wishing to remove artifacts. GFNMS, and MBNMS will consider enhancing visitor usage while mitigating damage to heritage resources by providing the sport and commercial diving communities and visitors to shoreline sites with interpretive information about archaeological sites and their protection. Sanctuary and California state regulations prohibit the un-permitted disturbance of submerged archaeological and historical resources. The ONMS and California State Lands Commission (CSLC) have an archaeological resource recovery permit system in place. Protection and monitoring of these sites will become a more pronounced responsibility in the sanctuaries' heritage resources management program. Partnerships will be established with local law enforcement agencies for site monitoring and compliance of public access to submerged sites.

Traditional User and Ocean-Dependent Groups

There is the potential to cultivate partnerships with local, state, and federal programs (e.g., American Folk Life Center, universities, Department of the Interior) and the identified communities. These partnerships could aid in the design and implementation of studies of living

maritime heritage and folk life to help educate the public about traditional cultures and practices including Native Americans, other ethnic residents, fishermen and economic activities reflecting historic human interaction with the ocean.

Education and Outreach

GFNMS, and MBNMS have partnered with CINMS and OCNMS in the development of the West Coast Shipwreck Database online curriculum. The database serves to inform the public about the historical significance of shipwrecks, including those posing environmental threats to sanctuary marine resources, e.g., the *Jacob Luckenbach* story. The database is being expanded to include living journals assisting families searching for information about shipwrecked vessels their relatives may once have served on as crewmembers or passengers. Family members are encouraged to share with the public their living journals associated with the shipwreck histories for dissemination. CBNMS, GFNMS, and MBNMS will identify partners to explore exhibit development at maritime or regional museums and learning centers that focus on the areas' maritime heritage history; shipwrecks, exploration, fishing, and fisheries; vessel trades, routes and nationalities; and shoreline structures such as lighthouses, lifesaving stations, canneries, dog-hole ports, whaling facilities, surfing, and boating.

STRATEGY XMHR-1: *Continue to build the Maritime Heritage Program.*

The ONMS is placing increasing emphasis on the development of maritime heritage resources programs to identify and protect submerged archaeological sites, and to increase public awareness about the maritime history associated with individual sanctuaries. A well-coordinated program will be required to identify and assess documented shipwrecks, some of which may pose significant environmental hazards; to protect sites from unauthorized disturbance; and to develop heritage partnerships and education programs.

Activity 1.1 Continue to identify potential maritime heritage partners and sources of funding.

Regional MHP staff should look for partners and funding opportunities to expand program into the expansion area.

STRATEGY XMHR-2: *Inventory and assess submerged sites.*

CBNMS, GFNMS, and MBNMS, in conjunction with the West Coast Regional Maritime Heritage Coordinator, will collaborate with state and federal agencies and the private sector to gather resource documentation and to create opportunities to locate and record submerged archaeological resources.

Activity 2.1 Inventory shipwrecks across the region.

Continue to establish external partnerships to inventory potential shipwreck sites with other federal, state, and local agencies as well as avocational archaeologists, commercial divers and fishermen, and recreational divers.

Activity 2.2 Conduct systematic research and surveys of archaeological sites, including the remains of prehistoric, as well as historic sites, representing ship and aircraft losses.

This effort would be focused on geographic regions with a high probability of cultural and historic remains established by conducting remote sensing surveys and/or diver investigations of target sites as part of larger research expeditions across the three sanctuaries. Such surveys would include the development of a research plan, education materials and curriculum, a project website, a site assessment report that include a comparison with previous surveys.

Activity 2.3 Establish a shipwreck reconnaissance and site monitoring program.

Use a model similar to that used at CINMS to record and monitor submerged sites and to document new artifact discoveries and evaluation of human site disturbance. Record site positions in NOAA's National Marine Sanctuary Archeological Site (ARCH) GIS database.

Activity 2.4 Assess and nominate appropriate submerged archaeological sites for inclusion in the National Register of Historic Places.

Regional MHP staff should look to contribute appropriate sites across the sanctuaries.

STRATEGY XMHR-3: *Assess shipwrecks and submerged structures for hazards.*

GFNMS and MBNMS, and possibly CBNMS, are faced with the challenge of identifying and monitoring historic and non-historic shipwrecks that may pose environmental threats to sanctuary marine resources. Information pertaining to shipwrecks as environmental threats is provided to NOAA's Emergency Response Division and the ONMS for the development of the SHIELDS and Remediation of Underwater Legacy Environmental Threats (RULET) database systems. The sanctuaries will develop a plan to address this issue since there are many shipwrecks that pose threats in the near future.

Activity 3.1 As needed, add to the inventory of shipwrecks, inside and outside of sanctuary boundaries, posing environmental threats to sanctuary marine resources.

This inventory is based upon primary and secondary source documentation from established shipwreck databases, interviews with commercial divers and fishermen, and recreational divers who frequently visit submerged shipwrecks. The sanctuaries will also collaborate with other organizations doing similar research. As the sanctuaries compile information regarding sites that may pose environmental threats, this information will be coordinated with NOAA's Emergency Response Division and the ONMS for the development of the SHIELDS and RULET database systems.

Activity 3.2 Monitor shipwreck sites.

Direct efforts to monitor sites that have been located and are considered a threat to sanctuary marine resources. Use protocols for site evaluation based on the monitoring work at such sites as the *Jacob Luckenbach* and the *Montebello*.

Activity 3.3 Coordinate with partners to reduce threats from shipwrecks.

GFNMS and MBNMS will continue to work with ONMS to identify shipwrecks that may pose environmental threats and will provide pertinent information to NOAA's Emergency Response Division and the ONMS for the inclusion in the SHIELDS and RULET GIS database systems. ONMS will work with other trustee agencies to develop a plan to monitor and prevent, reduce, and respond to environmental threats from any such vessels.

Activity 3.4 For historic shipwrecks, ensure compliance under Section 106 of the NHPA and the NMSA.

STRATEGY XMHR-4: *Protect and manage submerged archaeological resources.*

As part of the NEPA compliance process CBNMS, GFNMS and MBNMS are required to submit a review under Section 106 of the National Historic Preservation Act (NHPA) identifying historic and pre-historic archaeological properties and to take into account activities that may have an adverse or no adverse effect to these properties. Issues to be addressed by GFNMS, MBNMS, and possibly CBNMS, regarding the protection of submerged archaeological resources include:

- Permitting
- Site protection through enforcement and education
- Shipwrecks as environmental threats

Activity 4.1 Coordinate stewardship of submerged resources.

Jointly develop a uniform protocol to manage, monitor, and protect submerged sites within the three sanctuaries in partnership with appropriate local law enforcement agencies.

Activity 4.2 Provide training to sanctuary staff and facilitate training for partners.

The training will focus on the importance of submerged archaeological resources and the need and tools to manage and protect them and Section 106 requirements.

Activity 4.3 Identify archaeological and historic resources currently outside sanctuary boundaries that may be of significant historic interest or may pose a threat to sanctuary resources.

STRATEGY XMHR-5: *Conduct public outreach with traditional user and ocean-dependent groups and communities.*

A key aspect of the CBNMS, GFNMS, and MBNMS maritime heritage program will be to educate the public about traditional maritime cultures and practices including Native Americans; exploration; settlement; ethnic groups; whalers; dog-hole ports, historic and present-day fishermen; recreational uses; and traditional shipping, shipbuilding, canneries, and other economic activities reflecting historic human interaction with the ocean. Although sanctuary's maritime heritage protection status is given only to cultural and historical resources, the program recognizes that traditional user and ocean-dependent groups are interconnected with the sanctuaries and are an integral part of their history and cultural maritime landscape of the region. Therefore, this program will also acknowledge those traditional maritime heritage activities and practices consistent with the NMSA's primary goal of resource protection.

Activity 5.1 Identify traditional user and ocean-dependent groups.

Solicit and document the range of traditional user and ocean-dependent groups' ideas, values, etc. Conduct a literature search to gather resource documentation on traditional users and ocean-dependent groups and communities. Use this information to prioritize appropriate aspects of their maritime heritage.

Activity 5.2 Develop collaborative programs and initiatives.

GFNMS will initiate a partnership with the fishing community at Pillar Point Harbor to enhance relationships and jointly develop ways to educate the public on the interconnections with the three sanctuaries.

Activity 5.3 Create an inventory of historic and present maritime heritage communities.

Focus on traditionally associated people to support mapping, traditional place names, and interpretive programs. Assess and nominate appropriate sites for the National Register of Historic Places.

Activity 5.4 Map and document traditional communities and sites.

These communities and sites may include fishing and whaling sites; place names; shipping/commercial marine transport of passengers and cargo; lighthouses and life-saving stations; dog-hole ports; fort, tribes (coastal); and recreational uses such as surfing and diving.

STRATEGY XMHR-6: *Continue to provide maritime heritage-focused education and outreach programs.*

CBNMS, GFNMS and MBNMS's maritime cultural landscape of provides a unifying theme to educate and inform people along the California coast and throughout the country about the human interaction with the ocean. This involves understanding the broader context of specific

places that encompasses human activities that includes indigenous people of our nation's pre-historic and historic past as well as today's modern cultures and their sacred places; geography; paleontology; archaeology; traditional knowledge and sociocultural studies; oral traditions; commercial and recreational fisheries; recreation activities, maritime heritage resources such as lighthouses, piers, wharves, lifesaving stations, abandoned dog-hole ports and landings and working waterfronts, revealing the many human communities that overlap with marine environments in our national marine sanctuaries and contiguous waters. Through websites, museum exhibits, and other tools, the sanctuaries will continue to provide information on:

- Programs by and about traditional cultures and practices including Native Americans, ethnic groups, fishermen, and economic activities
- Shipwrecks, exploration, fishing and fisheries; trade vessels, routes and nationalities
- Shoreline structures such as lighthouses, life-saving stations, fort, canneries, dog-hole ports, and whaling facilities
- Traditional recreational activities such as diving, surfing, and boating
- Stewardship of our cultural and historic maritime resources

Activity 6.1 Improve information sharing and dialogue.

Hold an annual maritime heritage event to highlight specific cultural and historic resources that the sites are mandated to protect, such as archeological sites, shipwrecks, etc., and link to adjacent communities and human uses.

Activity 6.2 Create, expand and populate individual sanctuary websites and/or the West Coast Shipwreck Database.

The websites should include specific information about maritime heritage resources, such as living journals of traditional users and ocean-dependent groups as well as shipwreck survivors, archaeological project updates, potential environmental threats, and maps.

Activity 6.3 Develop and implement education and outreach programs and materials for the MHP.

Incorporate traditional users/ocean-dependent groups and submerged archaeological resources into existing and new education/outreach programs.

Activity 6.4 Collaborate on maritime heritage resource exhibits and signage.

The three sites will incorporate maritime heritage themes and messages as part of the California Statewide Signage, Exhibits, and Facilities plan.

TABLE XMHR-1: MEASURING PERFORMANCE OF THE CROSS-CUTTING MARITIME HERITAGE RESOURCES ACTION PLAN

Desired Outcome(s) For This Action Plan:	
Establish a well-coordinated joint maritime heritage program that identifies and assesses documented shipwrecks and associated environmental hazards; protects sites from unauthorized disturbance; and develops heritage partnerships and education programs.	
Performance Measures	Explanation
By Year 5, the Maritime Heritage program will identify and characterize all historical and cultural resources in these three sanctuaries in a Web database and, when appropriate, develop plans to protect these resources from threats. In the case of ships that pose a threat from oil spills, plans will be developed to mitigate harmful effects on natural resources.	The specific maritime heritage activities identified in this plan build upon existing site efforts and collectively establish a new joint maritime heritage program for this region. The program will allow these sites to be responsive to the NMSA mandate to identify and protect cultural and historic resources. Implementation of these strategies will better streamline and coordinate overall NMSP efforts to protect maritime heritage resources and expand awareness of the importance of these resources to the public.

KEY PARTNERS

CBNMS, GFNMS, MBNMS, CINMS, MAC, NOAA Emergency Response Division , NOAA Office of Response and Restoration, NOAA OLE, NPS, SHPO, California Sea Grant, CSLC, San Mateo County Harbor District – Pillar Point, and Half Moon Bay Fishermen’s Association, FMSA.



APPENDICES

CBNMS DRAFT MANAGEMENT PLAN

- I. Jurisdictional Authorities**
- II. Glossary**
- III. Acronyms**
- IV. National Marine Sanctuaries Act**
- V. Species List**

Appendix I: Jurisdictional Authorities

CBNMS is located entirely beyond the state tidelands and submerged lands (mean high tide to three nautical miles offshore) and is therefore under the jurisdiction of federal statutes with the exception that the CDFW exercises jurisdiction over certain fishing activities in CBNMS waters together with the NOAA, NMFS. The other federal agencies with existing primary responsibilities in the area of Cordell Bank are the USFWS and the BOEM and Bureau of Safety and Environmental Enforcement (BSEE) of the U.S. Department of the Interior, the USCG of the U.S. Department of Homeland Security, and the USEPA. This section will briefly review the responsibilities of these agencies.

FEDERAL AUTHORITIES

NMFS

The NMFS is responsible for enforcing the (MSFCMA, the MMPA, and the ESA. Under the MSFCMA, NMFS approves and enforces fishery management plans (FMP) prepared by regional fishery management councils. NMFS relies heavily on CDFW and USCG for enforcement operations both within and outside the territorial sea. Some of the CBNMS fish populations affected by FMP regulations are Lingcod, rockfish, and Salmon.

The NMFS shares responsibility with the FWS for implementation of the Marine Mammal Protection Act and the Endangered Species Act (see FWS entry below). NMFS is responsible for protecting cetaceans and pinnipeds and their habitats under both laws, as well as sea turtles and fish that are listed as threatened or endangered.

USFWS

Within the waters of CBNMS, the USFWS is responsible for protecting all marine mammal species other than cetaceans, as well as pinnipeds under the MMPA, and for protecting endangered or threatened bird species under the ESA. The Brown Pelican and Short-tailed Albatross are two bird species listed as endangered which forage in CBNMS.

USCG

The USCG, part of the U.S. Department of Homeland Security, has maritime security, safety and stewardship responsibilities, including investigation and law enforcement. It is also one of the five armed forces of the U.S. The scope of USCG jurisdiction includes environmental regulations, fisheries regulations (described under NMFS), pollution prevention and spill response regulations and policies, vessel traffic management, drug interdiction, and other maritime regulations (including vessel construction, design and operation).

Appendix I: Jurisdictional Authorities

CBNMS Draft Management Plan

The USCG supports national marine sanctuary management by providing routine surveillance and dedicated law enforcement of the national marine sanctuaries concurrently with other USCG operations.

Beside enforcement of national marine sanctuary regulations, other important roles the USCG fulfills relevant to national marine sanctuary management are: enforcement of Clean Water Act (CWA) regulations to prevent pollution from vessel discharges of oil, hazardous substances, or other pollutants; coordination of Area Contingency Plans, serving as the federal on-scene coordinator during marine spill events; and coordinating search and rescue operations.

For ship traffic entering and exiting San Francisco Bay, the USCG has established a Vessel Traffic Separation Scheme (VTSS) in accordance with the Ports and Waterways Safety Act (PWSA). The VTSS consists of inbound and outbound vessel traffic lanes that are each one nm wide with a separation zone between them that is also one nautical mile wide. The northern traffic lanes extend into CBNMS, and vessels approaching San Francisco Bay from the north and departing in that direction pass through CBNMS.

BOEM and BSEE

The BOEM and BSEE are two agencies that were created after the Bureau of Ocean Energy Management, Regulation and Enforcement (formerly called the Minerals Management Service) was reorganized in 2011.

The BOEM is responsible for managing development of the nation's offshore resources in accordance with the provisions of the Outer Continental Shelf Lands Act (OCSLA). BOEM's functions include offshore leasing, resource evaluation, review and administration of oil and gas exploration and development plans, renewable energy development, National Environmental Policy Act (NEPA) analysis and environmental studies. The BSEE is responsible for safety and environmental oversight of offshore oil and gas operations, including permitting and inspections, of offshore oil and gas operations, in accordance with the OCSLA. BSEE's functions include the development and enforcement of safety and environmental regulations, permitting offshore exploration, development and production, inspections, offshore regulatory programs, oil spill response and training and environmental compliance programs.

The OCSLA establishes federal jurisdiction over all submerged lands under U.S. jurisdiction lying seaward of state coastal waters.

The Energy Policy Act of 2005, Section 388, granted the Secretary of the Interior authority to regulate alternative energy and alternate use on the OCS. Section 388 authority does not apply to areas within National Marine Sanctuaries.

EPA

The EPA has regulatory responsibilities with regard to ocean dumping. Title I of the Marine Protection, Research and Sanctuaries Act prohibits the transportation of any materials from the

United States for the purpose of dumping them into the territorial sea, the contiguous zone, and the ocean beyond without a permit from EPA.

STATE AUTHORITIES

CDFW

The CDFW, under the Fish and Game Code (and Chapter 14 of the Administrative Code), regulates and manages a wide variety of activities affecting the living marine resources generally out to three nautical miles from the California coast and in the EEZ. CDFW manages several fisheries that occur in state and federal waters including Dungeness crab and squid. A number of fisheries that occur in federal waters, including groundfish included in the federal Groundfish Fishery Management Plan A are under the joint jurisdiction of the state and the federal government.

Appendix II: Glossary of Terms

Action plan: A major section of a management plan contain related strategies and activities designed to address a specific issue or function (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Activity: Specific actions that will be taken to carry out a strategy (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Bathymetry: Water depth measurement information used to produce depth-contoured charts.

Benthic: The region of the ocean consisting of the seabed and the organisms that live on or in it.

Benthic communities: Bottom-dwelling plants and animals.

Biodiversity: The variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

Continental shelf: A generally shallow, flat submerged portion of a continent, extending to the point of step descent to the ocean floor.

Critical habitat: The specific areas within the geographical area occupied by a threatened or endangered species on which are found those physical or biological features essential to the conservation of the species, and which may require special management considerations or protection.

Demersal: Fishes and other aquatic organisms that live near the bottom of the water column.

Depleted: A species is termed depleted when it falls below its optimum sustainable population.

Desired outcome: A succinct and concise statement that articulates a desired future for a sanctuary relative to a specific problem statement (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Ecology: The science of the relationships between organisms and their environments.

Ecosystem: The sum total of all living and nonliving components of a particular area that interact and exchange materials with each other; sometimes defined as the ecological community of organisms plus the environment with which they interact. Energy flow and nutrient cycling are regulated within a particular ecosystem and are studied as indicators of its overall health.

Endangered species: Any species that is in danger of extinction throughout all or a significant portion of its range.

Epifauna: Animals that live on the ocean bottom, either attached or moving freely over it.

Food chain: A succession of organisms in a community that constitutes a feeding chain in which food energy is transferred from one organism to another as each consumes a lower member and in turn is preyed upon by a higher member.

Indigenous: Living or occurring naturally in a specific area or environment.

Infaunal: Organisms that live buried in sediments, including a variety of polychaetes, burrowing crustaceans, and mollusks.

Infrastructure: Basic installations and facilities, such as roads, power plants, transportation, and communication systems.

Invertebrate: An animal lacking a backbone or spinal column.

Isobath: An imaginary line or one drawn on a map connecting all points of equal depth below the surface of a body of water.

Marine protected area: Any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein. (Executive Order 13158 on Marine Protected Areas). Under this broad definition, a wide variety of sites including fishery management zones, national parks, national marine sanctuaries, national estuarine research reserves, state conservation areas, critical habitats, and state reserves could be considered as marine protected areas.

Marine reserve: A kind of marine protected area generally agreed to have strict regulations regarding the extraction of resources.

Mollusks: Any of various members of the phylum Mollusca, largely marine invertebrates, including the edible shellfish and some 100,000 other species.

Multibeam: A type of sonar that has multiple beams to record water depth.

Organism: Plant or animal.

Pathogens: Any agent, most commonly a micro-organism, capable of causing a disease.

Pelagic: Of, relating to, or living in open seas or oceans rather than waters adjacent to land or inland waters.

Planktonic: Organisms dependent on water movement and currents as their means of transportation, including phytoplankton, zooplankton, and ichthyoplankton.

Program/Issue Statements: A one or two sentence articulation of the specific components of an issue (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Salinity: The relative concentration of salts, usually sodium chloride, in a given water sample. It is usually expressed in terms of the number of parts per thousand (ppt) or parts per million (ppm) of chlorine (Cl). As a reference, the salinity of seawater is approximately 35 ppt.

Side-scan sonar: A type of sonar that gathers sound reflections at oblique angles to the sensor.

Socioeconomic: Being both social and economic.

Strategy: The means by which a particular desired outcome can be achieved (NOAA, *National Marine Sanctuary Management Plan Handbook*, 3rd edition, 2002).

Substrate: A surface on which a plant or animal grows or is attached.

Terms of designation: A portion of the regulations for a given sanctuary that spells out its boundaries, regulations, and those activities potentially subject to future regulation.

Threatened Species: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Trawling: To fish using a trawl, a large tapered and flattened or conical net towed along the sea bottom.

Trolling: To fish by running a baited line behind a slowly moving boat.

Trophic: A description related to feeding; it often refers to a feeding level in a food chain.

Trophic level: One of a succession of steps in the movement of energy and matter through a food chain in an ecosystem.

Turbidity: The extent to which there are suspended or stirred up particles or sediments, as in the water column.

Appendix III: Acronyms

ACCEO	Alliance for California Current Ecosystem Observation
ACCESS	Applied California Current Ecosystem Studies
ACP	Area Contingency Plan
ACR	Audubon Canyon Ranch
ACS	American Cetacean Society
AIS	Automated Identification System
AOP	Annual Operating Plan
APPS	U.S. Act to Prevent Pollution from Ships
ARCH	National Marine Sanctuary Archeological Site GIS database
ATOC	Acoustic Thermometry of Ocean Climate
AUV	Autonomous Underwater Vehicle
Beach COMBERS	Beach Coastal Ocean/Marine Bird Education Research Surveys
BML	Bodega Marine Laboratory
BMP	best management practices
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
CalCOFI	California Cooperative Oceanic Fisheries Investigations
CAS	California Academy of Sciences
CBNMS	Cordell Bank National Marine Sanctuary
CDFW	California Department of Fish and Wildlife
CeNCOOS	Central and Northern California Ocean Observing System
CFR	Code of Federal Regulations
CIMT	Center for Integrated Marine Technology
CINMS	Channel Islands National Marine Sanctuary
CMAR	Coastal Maritime Archaeology Resources
CMSF	Cordell Marine Sanctuary Foundation
COASST	Coastal Observation And Seabird Survey Team
CODAR	Coastal Ocean Dynamics Applications Radar
COSEE	Centers for Ocean Sciences Education
CSC	Coastal Services Center
CSLC	California State Lands Commission
CSUMB	California State University Monterey Bay
CWA	U.S. Clean Water Act
DARRF	Damage Assessment and Restoration Evolving Fund
DDT	Dichlorodiphenyltrichloroethane
DOC	U.S. Department of Commerce
DOI	U. S. Department of the Interior
EDS	Ecosystem Dynamics Study
EECOM	Environmental Education Council of Marin
EFH	essential fish habitat
EIR	Environmental Impact Report
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FEIS/MP	Final Environmental Impact Statement and Management Plan
FGBNMS	Flower Garden Banks National Marine Sanctuary

Appendix III: Acronyms
CBNMS Draft Management Plan

FGC	California Fish and Game Commission
FGDC	Federal Geospatial Data Center
FMP	Fishery Management Plan
FMSA	Farallones Marine Sanctuary Association
FTE	Full Time Equivalent (full time federal employee)
FWCPA	Federal Water Pollution Control Act
GCEL	General Council Enforcement Litigation
GCOS	General Council Ocean Service
GFNMS	Gulf of the Farallones National Marine Sanctuary
GGNRA	Golden Gate National Recreation Area
GIS	geographic information system
GPS	global positioning system
GRNMS	Gray's Reef National Marine Sanctuary
GSA	General Services Administration
HAB	harmful algal bloom
HAZMAT	Hazardous Materials Response Division
HIHWNMS	Hawaiian Islands Humpback Whale National Marine Sanctuary
HMB	Half Moon Bay Regional Office
IACC	Interagency Coordinating Committee
ICES	International Council for Exploration of the Sea
ICS	Incident Command System
IFQ	individual fishing quota
IGERT	Integrative Graduate Education and Research Traineeship Program
IMO	International Maritime Organization
IOOS	Integrated Ocean Observing System
ITQ	individual transferable quota
IUCN	International Union for Conservation of Nature and Natural Resources
JASON	The JASON Project
JMPR	Joint Management Plan Review
JRAP	Joint Research Advisory Panel
LCV	Large Commercial Vessels
LiMPETS	Long-term Monitoring Program and Experiential Training for Students
LRA	List of Recommended Areas
MAC	Maritime Archeological Center
MARE	Marine Activities, Resources, and Education
MARINe	Multi-Agency Rocky Intertidal Network
MARPOL	International Convention for the Prevention of Pollution from Ships
MATE	Marine Advanced Technology Education Center
MBARI	Monterey Bay Aquarium Research Institute
MBNMS	Monterey Bay National Marine Sanctuary
MBSF	Monterey Bay & Channel Islands Sanctuary Foundation
MBTA	Migratory Bird Treaty Act
MERITO	Multicultural Education for Resource Issues Threatening Oceans
MHP	Marine Heritage Program
MLML	Moss Landing Marine Laboratories
MLPA	Marine Life Protection Act
MMPA	Marine Mammal Protection Act
MOA	memorandum of agreement

MOU	memorandum of understanding
MP	Management Plan
MPA	marine protected area
MSD	marine sanitation device
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
NANPCA	Nonindigenous Aquatic Nuisance Prevention and Control Act
NAS	Nautical Archaeology Society
NCCOS	The National Centers for Coastal Ocean Science
NDBC	National Data Buoy Center
NEPA	National Environmental Policy Act
NERRS	National Estuarine Research Reserve System
NESDIS	National Environmental Satellite Data Information Service
NGO	non-governmental organization
NGS	National Geographic Society
NHPA	National Historic Preservation Act
NISA	National Invasive Species Act of 1996
NISAC	Non-native Invasive Species Advisory Committee
NM	nautical mile
NMA	Northern Management Area
NMFS	National Marine Fisheries Service
NMSA	National Marine Sanctuaries Act
NMSF	National Marine Sanctuary Foundation
NOAA	National Oceanic and Atmospheric Administration
NOAA OLE	NOAA Office of Law Enforcement
NODC	National Oceanographic Data Center
NOS	National Ocean Service
NPDES	National Pollutant Discharge Elimination System
NPR	National Public Radio
NPS	National Park Service
NRDA	National Resource Damage Assessment and Restoration
NURP	National Undersea Research Program
NWFSC	North West Fisheries Science Center
NWS	National Weather Service
OCNMS	Olympic Coast National Marine Sanctuary
OCRM	Office of Ocean and Coastal Resource Management
OCS	Outer Continental Shelf
OES	Office of Emergency Services
ONMS	Office of National Marine Sanctuaries
OPA	Oil Spill Prevention Act of 1990
ORR	Office of Response and Restoration
OSPR	Office of Spill Prevention and Response
OSRO	Oil Spill Response Organization
PCFFA	Pacific Coast Federation of Fishermen's Associations
PCLC	Pacific Coast Learning Center
PFMC	Pacific Fishery Management Council
PISCO	Partnership for Interdisciplinary Studies of Coastal Oceans
PRCS	Point Reyes Conservation Science
PRNS	Point Reyes National Seashore

Appendix III: Acronyms
CBNMS Draft Management Plan

PRNSA	Point Reyes National Seashore Association
PSA	public service announcement
PSMFC	Pacific States Marine Fisheries Commission
PWSA	Ports and Waterways Safety Act
RAP	Research Advisory Panel
ROV	remotely operated vehicle
RRP	Regional Response Plan
RUST	Resources and Under Sea Threats
SBNMS	Stellwagen Bank National Marine Sanctuary
SCCWRP	Southern California Coastal Water Research Project Authority
SCRP	Submerged Cultural Resources Program
SEAMAP	Southeast Area Monitoring and Assessment Program
SeaWif	Sea-viewing Wide Field of Vision
SERC	Smithsonian Environmental Research Center
SFBNERR	San Francisco Bay National Estuarine Research Reserve
SFSU	San Francisco State University
SHIELDS	Sanctuaries Hazardous Incident Emergency Logistics Database System
SHPO	California State Historic Preservation Office
SIMoN	Sanctuary Integrated Monitoring Network
SRP	Shipwreck Reconnaissance Program
SWiM	System Wide Monitoring Program
SWMEA	Southwest Marine and Aquatic Educator's Association
TBNMS	Thunder Bay National Marine Sanctuary
Team OCEAN	TEAM Ocean Conservation Education Action Network
TMMC	The Marine Mammal Center
UCD	University of California Davis
UCSC	University of California Santa Cruz
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VTs	Vessel Traffic System
VTSS	Vessel Traffic Separation Schemes
WCRO	West Coast Regional Office
WQPP	Water Quality Protection Program

Appendix IV: National Marine Sanctuaries Act

16 U.S.C. 1431 ET SEQ., as amended by Public Law 106-513

Sec. 301. FINDINGS, PURPOSES, AND POLICIES; ESTABLISHMENT OF SYSTEM

(a) FINDINGS.--The Congress finds that--

(1) this Nation historically has recognized the importance of protecting special areas of its public domain, but these efforts have been directed almost exclusively to land areas above the high-water mark;

(2) certain areas of the marine environment possess conservation, recreational, ecological, historical, scientific, educational, cultural, archeological, or aesthetic qualities which give them special national, and in some instances, international, significance;

(3) while the need to control the effects of particular activities has led to enactment of resource-specific legislation, these laws cannot in all cases provide a coordinated and comprehensive approach to the conservation and management of special areas of the marine environment; and

(4) a Federal program which establishes areas of the marine environment which have special conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, or aesthetic qualities as national marine sanctuaries managed as the National Marine Sanctuary System will--

(A) improve the conservation, understanding, management, and wise and sustainable use of marine resources;

(B) enhance public awareness, understanding, and appreciation of the marine environment; and

(C) maintain for future generations the habitat, and ecological services, of the natural assemblage of living resources that inhabit these areas.

(b) PURPOSES AND POLICIES.--The purposes and policies of this title are--

(1) to identify and designate as national marine sanctuaries areas of the marine environment which are of special national significance and to manage these areas as the National Marine Sanctuary System;

(2) to provide authority for comprehensive and coordinated conservation and management of these marine areas, and activities affecting them, in a manner which complements existing regulatory authorities;

Appendix IV: National Marine Sanctuaries Act
CBNMS Draft Management Plan

(3) to maintain the natural biological communities in the national marine sanctuaries, and to protect, and, where appropriate, restore and enhance natural habitats, populations, and ecological processes;

(4) to enhance public awareness, understanding, appreciation, and wise and sustainable use of the marine environment, and the natural, historical, cultural, and archeological resources of the National Marine Sanctuary System;

(5) to support, promote, and coordinate scientific research on, and long-term monitoring of, the resources of these marine areas;

(6) to facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas not prohibited pursuant to other authorities;

(7) to develop and implement coordinated plans for the protection and management of these areas with appropriate Federal agencies, State and local governments, Native American tribes and organizations, international organizations, and other public and private interests concerned with the continuing health and resilience of these marine areas;

(8) to create models of, and incentives for, ways to conserve and manage these areas, including the application of innovative management techniques; and

(9) to cooperate with global programs encouraging conservation of marine resources.

(c) ESTABLISHMENT OF SYSTEM.-There is established the National Marine Sanctuary System, which shall consist of national marine sanctuaries designated by the Secretary in accordance with this title.

Sec. 302. DEFINITIONS

As used in this title, the term--

(1) "management plan" means the plan described in section 304(a)(1)(C)(v);

(2) "Magnuson-Stevens Act" means the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.);

(3) "marine environment" means those areas of coastal and ocean waters, the Great Lakes and their connecting waters, and submerged lands over which the United States exercises jurisdiction, including the exclusive economic zone, consistent with international law;

(4) "Secretary" means the Secretary of Commerce;

(5) "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, American Samoa, the Virgin Islands, Guam, and any other commonwealth, territory, or possession of the United States;

(6) "damages" includes--

(A) compensation for--

(i)(I) the cost of replacing, restoring, or acquiring the equivalent of a sanctuary resource; and (II) the value of the lost use of a sanctuary resource pending its restoration or replacement or the acquisition of an equivalent sanctuary resource; or

(ii) the value of a sanctuary resource if the sanctuary resource cannot be restored or replaced or if the equivalent of such resource cannot be acquired;

(B) the cost of damage assessments under section 312(b)(2);

(C) the reasonable cost of monitoring appropriate to the injured, restored, or replaced resources;

(D) the cost of curation and conservation of archeological, historical, and cultural sanctuary resources; and

(E) the cost of enforcement actions undertaken by the Secretary in response to the destruction or loss of, or injury to, a sanctuary resource;

(7) "response costs" means the costs of actions taken or authorized by the Secretary to minimize destruction or loss of, or injury to, sanctuary resources, or to minimize the imminent risks of such destruction, loss, or injury, including costs related to seizure forfeiture, storage, or disposal arising from liability under section 312;

(8) "sanctuary resource" means any living or nonliving resource of a national marine sanctuary that contributes to the conservation, recreational, ecological, historical, educational, cultural, archeological, scientific, or aesthetic value of the sanctuary;

(9) "exclusive economic zone" means the exclusive economic zone as defined in the Magnuson-Stevens Act; and

(10) 'System' means the National Marine Sanctuary System established by section 301.

Sec. 303. SANCTUARY DESIGNATION STANDARDS

(a) STANDARDS.--The Secretary may designate any discrete area of the marine environment as a national marine sanctuary and promulgate regulations implementing the designation if the Secretary determines that--

(1) the designation will fulfill the purposes and policies of this title;

(2) the area is of special national significance due to-

(A) its conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or aesthetic qualities;

(B) the communities of living marine resources it harbors; or

(C) its resource or human-use values;

(3) existing State and Federal authorities are inadequate or should be supplemented to ensure coordinated and comprehensive conservation and management of the area, including resource protection, scientific research, and public education;

(4) designation of the area as a national marine sanctuary will facilitate the objectives in subparagraph (3); and

(5) the area is of a size and nature that will permit comprehensive and coordinated conservation and management.

(b) FACTORS AND CONSULTATIONS REQUIRED IN MAKING DETERMINATIONS AND FINDINGS.--

(1) Factors.--For purposes of determining if an area of the marine environment meets the standards set forth in subsection (a), the Secretary shall consider--

(A) the area's natural resource and ecological qualities, including its contribution to biological productivity, maintenance of ecosystem structure, maintenance of ecologically or commercially important or threatened species or species assemblages, maintenance of critical habitat of endangered species, and the biogeographic representation of the site;

(B) the area's historical, cultural, archaeological, or paleontological significance;

(C) the present and potential uses of the area that depend on maintenance of the area's resources, including commercial and recreational fishing, subsistence uses other than commercial and recreational activities, and research and education;

(D) the present and potential activities that may adversely affect the factors identified in subparagraphs (A), (B), (C);

(E) the existing State and Federal regulatory and management authorities applicable to the area and the adequacy of those authorities to fulfill the purposes and policies of this title;

(F) the manageability of the area, including such factors as its size, its ability to be identified as a discrete ecological unit with definable boundaries, its accessibility, and its suitability for monitoring and enforcement activities;

(G) the public benefits to be derived from sanctuary status, with emphasis on the benefits of long-term protection of nationally significant resources, vital habitats, and resources which generate tourism;

(H) the negative impacts produced by management restrictions on income-generating activities such as living and nonliving resources development;

(I) the socioeconomic effects of sanctuary designation;

(J) the area's scientific value and value for monitoring the resources and natural processes that occur there;

(K) the feasibility, where appropriate, of employing innovative management approaches to protect sanctuary resources or to manage compatible uses; and

(L) the value of the area as an addition to the System.

(2) Consultation.--In making determinations and findings, the Secretary shall consult with--

(A) the Committee on Resources of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate;

(B) the Secretaries of State, Defense, Transportation, and the Interior, the Administrator, and the heads of other interested Federal agencies;

(C) the responsible officials or relevant agency heads of the appropriate State and local government entities, including coastal zone management agencies, that will or are likely to be affected by the establishment of the area as a national marine sanctuary;

(D) the appropriate officials of any Regional Fishery Management Council established by section 302 of the Magnuson-Stevens Act (16 U.S.C. 1852) that may be affected by the proposed designation; and

(E) other interested persons.

Sec. 304. PROCEDURES FOR DESIGNATION AND IMPLEMENTATION

(a) SANCTUARY PROPOSAL.--

(1) Notice.--In proposing to designate a national marine sanctuary, the Secretary shall--

(A) issue, in the Federal Register, a notice of the proposal, proposed regulations that may be necessary and reasonable to implement the proposal, and a summary of the management plan;

(B) provide notice of the proposal in newspapers of general circulation or electronic media in the communities that may be affected by the proposal; and

***Appendix IV: National Marine Sanctuaries Act
CBNMS Draft Management Plan***

(C) no later than the day on which the notice required under subparagraph (A) is submitted to Office of the Federal Register, submit a copy of that notice and the sanctuary designation documents prepared pursuant to section 304(a)(2), including an executive summary, to the Committee on Resources of the House of Representatives, the Committee on Commerce, Science, and Transportation of the Senate, and the Governor of each State in which any part of the proposed sanctuary would be located.

(2) Sanctuary Designation Documents.--The Secretary shall prepare and make available to the public sanctuary designation documents on the proposal that include the following:

(A) A environmental impact statement pursuant to the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

(B) A resource assessment that documents--

(i) present and potential uses of the area, including commercial and recreational fishing, research and education, minerals and energy development, subsistence uses, and other commercial, governmental, or recreational uses;

(ii) after consultation with the Secretary of the Interior, any commercial, governmental, or recreational resource uses in the areas that are subject to the primary jurisdiction of the Department of the Interior; and

(iii) information prepared in consultation with the Secretary of Defense, the Secretary of Energy, and the Administrator of the Environmental Protection Agency, on any past, present, or proposed future disposal or discharge of materials in the vicinity of the proposed sanctuary. Public disclosure by the Secretary of such information shall be consistent with national security regulations.

(C) A management plan for the proposed national marine sanctuary that includes the following:

(i) The terms of the proposed designation.

(ii) Proposed mechanisms to coordinate existing regulatory and management authorities within the area.

(iii) The proposed goals and objectives, management responsibilities, resource studies, and appropriate strategies for managing sanctuary resources of the proposed sanctuary, including interpretation and education, innovative management strategies, research, monitoring and assessment, resource protection, restoration, enforcement, and surveillance activities.

(iv) An evaluation of the advantages of cooperative State and Federal management if all or part of the proposed sanctuary is within the territorial limits of any State or is superjacent to the subsoil and seabed within the seaward boundary of a State, as that boundary is established under the Submerged Lands Act (43 U.S.C. 1301 et seq.).

(v) An estimate of the annual cost to the Federal Government of the proposed designation, including costs of personnel, equipment and facilities, enforcement, research, and public education.

(vi) The proposed regulations referred to in paragraph (1)(A).

(D) Maps depicting the boundaries of the proposed sanctuary.

(E) The basis for the determinations made under section 303(a) with respect to the area.

(F) An assessment of the considerations under section 303(b)(1).

(3) Public Hearing.--No sooner than thirty days after issuing a notice under this subsection, the Secretary shall hold at least one public hearing in the coastal area or areas that will be most affected by the proposed designation of the area as a national marine sanctuary for the purpose of receiving the views of interested parties.

(4) Terms of Designation.--The terms of designation of a sanctuary shall include the geographic area proposed to be included within the sanctuary, the characteristics of the area that give it conservation, recreational, ecological, historical, research, educational, or aesthetic value, and the types of activities that will be subject to regulation by the Secretary to protect those characteristics. The terms of designation may be modified only by the same procedures by which the original designation is made.

(5) Fishing Regulations.--The Secretary shall provide the appropriate Regional Fishery Management Council with the opportunity to prepare regulations for fishing within the Exclusive Economic Zone as the Council may deem necessary to implement the proposed designation. Draft regulations prepared by the Council, or a Council determination that regulations are not necessary pursuant to this paragraph, shall be accepted and issued as proposed regulations by the Secretary unless the Secretary finds that the Council's action fails to fulfill the purposes and policies of this title and the goals and objectives of the proposed designation. In preparing the regulations, a Regional Fishery Management Council shall use as guidance the national standards of section 301(a) of the Magnuson-Stevens Act (16 U.S.C. 1851) to the extent that the standards are consistent and compatible with the goals and objectives of the proposed designation. The Secretary shall prepare the fishing regulations, if the Council declines to make a determination with respect to the need for regulations, makes a determination which is rejected by the Secretary, or fails to prepare the regulations in a timely manner. Any amendments to the fishing regulations shall be drafted, approved, and issued in the same manner as the original regulations. The Secretary shall also cooperate with other appropriate fishery management authorities with rights or responsibilities within a proposed sanctuary at the earliest practicable stage in drafting any sanctuary fishing regulations.

(6) Committee Action.--After receiving the documents under subsection (a)(1)(C), the Committee on Resources of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate may each hold hearings on the proposed designation and on the

matters set forth in the documents. If within the forty-five day period of continuous session of Congress beginning on the date of submission of the documents, either Committee issues a report concerning matters addressed in the documents, the Secretary shall consider this report before publishing a notice to designate the national marine sanctuary.

(b) TAKING EFFECT OF DESIGNATIONS.--

(1) Notice.--In designating a national marine sanctuary, the Secretary shall publish in the Federal Register notice of the designation together with final regulations to implement the designation and any other matters required by law, and submit such notice to the Congress. The Secretary shall advise the public of the availability of the final management plan and the final environmental impact statement with respect to such sanctuary. The Secretary shall issue a notice of designation with respect to a proposed national marine sanctuary site not later than 30 months after the date a notice declaring the site to be an active candidate for sanctuary designation is published in the Federal Register under regulations issued under this Act, or shall publish not later than such date in the Federal Register findings regarding why such notice has not been published. No notice of designation may occur until the expiration of the period for Committee action under subsection (a)(6). The designation (and any of its terms not disapproved under this subsection) and regulations shall take effect and become final after the close of a review period of forty-five days of continuous session of Congress beginning on the day on which such notice is published unless in the case of a natural [sic] marine sanctuary that is located partially or entirely within the seaward boundary of any State, the Governor affected certifies to the Secretary that the designation or any of its terms is unacceptable, in which case the designation or the unacceptable term shall not take effect in the area of the sanctuary lying within the seaward boundary of the State.

(2) Withdrawal of Designation.-- If the Secretary considers that actions taken under paragraph (1) will affect the designation of a national marine sanctuary in a manner that the goals and objectives of the sanctuary or System cannot be fulfilled, the Secretary may withdraw the entire designation. If the Secretary does not withdraw the designation, only those terms of the designation or not certified under paragraph (1) shall take effect.

(3) Procedures.-- In computing the forty-five-day periods of continuous session of Congress pursuant to subsection (a)(6) and paragraph (1) of this subsection--

(A) continuity of session is broken only by an adjournment of Congress sine die; and

(B) the days on which either House of Congress is not in session because of an adjournment of more than three days to a day certain are excluded.

(c) ACCESS AND VALID RIGHTS.--

(1) Nothing in this title shall be construed as terminating or granting to the Secretary the right to terminate any valid lease, permit, license, or right of subsistence use or of access that is in existence on the date of designation of any national marine sanctuary.

(2) The exercise of a lease, permit, license, or right is subject to regulation by the Secretary consistent with the purposes for which the sanctuary is designated.

(d) INTERAGENCY COOPERATION.--

(1) Review of Agency Actions.--

(A) In General.--Federal agency actions internal or external to a national marine sanctuary, including private activities authorized by licenses, leases, or permits, that are likely to destroy, cause the loss of, or injure any sanctuary resource are subject to consultation with the Secretary.

(B) Agency Statements Required.-- Subject to any regulations the Secretary may establish each Federal agency proposing an action described in subparagraph (A) shall provide the Secretary with a written statement describing the action and its potential effects on sanctuary resources at the earliest practicable time, but in no case later than 45 days before the final approval of the action unless such Federal agency and the Secretary agree to a different schedule.

(2) Secretary's Recommended Alternatives.--If the Secretary finds that a Federal agency action is likely to destroy, cause the loss of, or injure a sanctuary resource, the Secretary shall (within 45 days of receipt of complete information on the proposed agency action) recommend reasonable and prudent alternatives, which may include conduct of the action elsewhere, which can be taken by the Federal agency in implementing the agency action that will protect sanctuary resources.

(3) Response to Recommendations.--The agency head who receives the Secretary's recommended alternatives under paragraph (2) shall promptly consult with the Secretary on the alternatives. If the agency head decides not to follow the alternatives, the agency head shall provide the Secretary with a written statement explaining the reasons for that decision.

(4) FAILURE TO FOLLOW ALTERNATIVE.--If the head of a Federal agency takes an action other than an alternative recommended by the Secretary and such action results in the destruction of, loss of, or injury to a sanctuary resource, the head of the agency shall promptly prevent and mitigate further damage and restore or replace the sanctuary resource in a manner approved by the Secretary.

(e) REVIEW OF MANAGEMENT PLANS.--Not more than 5 years after the date of designation of any national marine sanctuary, and thereafter at intervals not exceeding 5 years, the Secretary shall evaluate the substantive progress toward implementing the management plan and goals for the sanctuary, especially the effectiveness of site-specific management techniques and strategies, and shall revise the management plan and regulations as necessary to fulfill the purposes and policies of this title. This review shall include a prioritization of management objectives.

(f) LIMITATION ON DESIGNATION OF NEW SANCTUARIES.--

Appendix IV: National Marine Sanctuaries Act
CBNMS Draft Management Plan

(1) FINDING REQUIRED.--The Secretary may not publish in the Federal Register any sanctuary designation notice or regulations proposing to designate a new sanctuary, unless the Secretary has published a finding that--

(A) the addition of a new sanctuary will not have a negative impact on the System; and

(B) sufficient resources were available in the fiscal year in which the finding is made to--

(i) effectively implement sanctuary management plans for each sanctuary in the System; and

(ii) complete site characterization studies and inventory known sanctuary resources, including cultural resources, for each sanctuary in the System within 10 years after the date that the finding is made if the resources available for those activities are maintained at the same level for each fiscal year in that 10 year period.

(2) DEADLINE.--If the Secretary does not submit the findings required by paragraph (1) before February 1, 2004, the Secretary shall submit to the Congress before October 1, 2004, a finding with respect to whether the requirements of subparagraphs (A) and (B) of paragraph 1 have been met by all existing sanctuaries.

(3) LIMITATION ON APPLICATION.--Paragraph (1) does not apply to any sanctuary designation documents for--

(A) a Thunder Bay National Marine Sanctuary; or

(B) a Northwestern Hawaiian Islands National Marine Sanctuary.

(g) NORTHWESTERN HAWAIIAN ISLANDS CORAL REEF RESERVE.--

(1) PRESIDENTIAL DESIGNATION.--The President, after consultation with the Governor of the State of Hawaii, may designate any Northwestern Hawaiian Islands coral reef or coral reef ecosystem as a coral reef reserve to be managed by the Secretary of Commerce.

(2) SECRETARIAL ACTION.--Upon the designation of a reserve under paragraph (1) by the President, the Secretary shall--

(A) take action to initiate the designation of the reserve as a National Marine Sanctuary under sections 303 and 304 of the National Marine Sanctuaries Act (16 U.S.C. 1433);

(B) establish a Northwestern Hawaiian Islands Reserve Advisory Council under section 315 of that Act (16 U.S.C. 1445a), the membership of which shall include at least 1 representative from Native Hawaiian groups; and

(C) until the reserve is designated as a National Marine Sanctuary, manage the reserve in a manner consistent with the purposes and policies of that Act.

(3) PUBLIC COMMENT.--Notwithstanding any other provision of law, no closure areas around the Northwestern Hawaiian Islands shall become permanent without adequate review and comment.

(4) COORDINATION.--The Secretary shall work with other Federal agencies and the Director of the National Science Foundation, to develop a coordinated plan to make vessels and other resources available for conservation or research activities for the reserve.

(5) REVIEW.--If the Secretary has not designated a national marine sanctuary in the Northwestern Hawaiian Islands under sections 303 and 304 of the National Marine Sanctuaries Act (16 U.S.C. 1433, 1434) before October 1, 2005, the Secretary shall conduct a review of the management of the reserve under section 304(e) of that Act (16 U.S.C. 1434(e)).

(6) REPORT.--No later than 6 months after the date of enactment of this Act, the Secretary shall submit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Resources, describing actions taken to implement this subsection, including costs of monitoring, enforcing, and addressing marine debris, and the extent to which the fiscal or other resources necessary to carry out this subsection are reflected in the Budget of the United States Government submitted by the President under section 1104 of title 31, United States Code.

(7) AUTHORIZATION OF APPROPRIATIONS.--There are authorized to be appropriated to the Secretary of Commerce to carry out the provisions of this subsection such sums, not exceeding \$4,000,000 for each of fiscal years 2001, 2002, 2003, 2004, and 2005, as are reported under paragraph (6) to be reflected in the Budget of the United States Government.

Sec. 305. APPLICATION OF REGULATIONS AND INTERNATIONAL NEGOTIATIONS

(a) REGULATIONS.--This title and the regulations issued under section 304 shall be applied in accordance with generally recognized principles of international law, and in accordance with the treaties, conventions, and other agreements to which the United States is a party. No regulation shall apply to or be enforced against a person who is not a citizen, national, or resident alien of the United States, unless in accordance with--

- (1) generally recognized principles of international law;
- (2) an agreement between the United States and the foreign state of which the person is a citizen; or
- (3) an agreement between the United States and the flag state of a foreign vessel, if the person is a crewmember of the vessel.

(b) NEGOTIATIONS.--The Secretary of State, in consultation with the Secretary, shall take appropriate action to enter into negotiations with other governments to make necessary

arrangements for the protection of any national marine sanctuary and to promote the purposes for which the sanctuary is established.

(c) INTERNATIONAL COOPERATION.--The Secretary, in consultation with the Secretary of State and other appropriate Federal agencies, shall cooperate with other governments and international organizations in the furtherance of the purposes and policies of this title and consistent with applicable regional and multilateral arrangements for the protection and management of special marine areas.

Sec. 306. PROHIBITED ACTIVITIES

It is unlawful for any person to--

(1) destroy, cause the loss of, or injure any sanctuary resource managed under law or regulations for that sanctuary;

(2) possess, sell, offer for sale, purchase, import, export, deliver, carry, transport, or ship by any means any sanctuary resource taken in violation of this section;

(3) interfere with the enforcement of this title by--

(A) refusing to permit any officer authorized to enforce this title to board a vessel, other than a vessel operated by the Department of Defense or United States Coast Guard, subject to such person's control for the purposes of conducting any search or inspection in connection with the enforcement of this title;

(B) resisting, opposing, impeding, intimidating, harassing, bribing, interfering with, or forcibly assaulting any person authorized by the Secretary to implement this title or any such authorized officer in the conduct of any search or inspection performed under this title; or

(C) knowingly and willfully submitting false information to the Secretary or any officer authorized to enforce this title in connection with any search or inspection conducted under this title; or

(4) violate any provision of this title or any regulation or permit issued pursuant to this title.

Sec. 307. ENFORCEMENT

(a) IN GENERAL.--The Secretary shall conduct such enforcement activities as are necessary and reasonable to carry out this title.

(b) POWERS OF AUTHORIZED OFFICERS.--Any person who is authorized to enforce this title may--

(1) board, search, inspect, and seize any vessel suspected of being used to violate this title or any regulation or permit issued under this title and any equipment, stores, and cargo of such vessel;

(2) seize wherever found any sanctuary resource taken or retained in violation of this title or any regulation or permit issued under this title;

(3) seize any evidence of a violation of this title or of any regulation or permit issued under this title;

(4) execute any warrant or other process issued by any court of competent jurisdiction;

(5) exercise any other lawful authority; and

(6) arrest any person, if there is reasonable cause to believe that such a person has committed an act prohibited by section 306(3).

(c) CRIMINAL OFFENSES.--

(1) OFFENSES.--A person is guilty of an offense under this subsection if the person commits any act prohibited by section 306(3).

(2) PUNISHMENT.--Any person that is guilty of an offense under this subsection--

(A) except as provided in subparagraph (B), shall be fined under title 18, United States Code, imprisoned for not more than 6 months, or both; or

(B) in the case of a person who in the commission of such an offense uses a dangerous weapon, engages in conduct that causes bodily injury to any person authorized to enforce this title or any person authorized to implement the provisions of this title, or places any such person in fear of imminent bodily injury, shall be fined under title 18, United States Code, imprisoned for not more than 10 years, or both.

(d) CIVIL PENALTIES.--

(1) Civil penalty.--Any person subject to the jurisdiction of the United States who violates this title or any regulation or permit issued under this title shall be liable to the United States for a civil penalty of not more than \$100,000 for each such violation, to be assessed by the Secretary. Each day of a continuing violation shall constitute a separate violation.

(2) Notice.--No penalty shall be assessed under this subsection until after the person charged has been given notice and an opportunity for a hearing.

(3) In Rem Jurisdiction.--A vessel used in violating this title or any regulation or permit issued under this title shall be liable in rem for any civil penalty assessed for such violation. Such penalty shall constitute a maritime lien on the vessel and may be recovered in an action in rem in the district court of the United States having jurisdiction over the vessel.

(4) Review of Civil Penalty.--Any person against whom a civil penalty is assessed under this subsection may obtain review in the United States district court for the appropriate district by filing a complaint in such court not later than 30 days after the date of such order.

(5) Collection of Penalties.--If any person fails to pay an assessment of a civil penalty under this section after it has become a final and unappealable order, or after the appropriate court has entered final judgment in favor of the Secretary, the Secretary shall refer the matter to the Attorney General, who shall recover the amount assessed in any appropriate district court of the United States. In such action, the validity and appropriateness of the final order imposing the civil penalty shall not be subject to review.

(6) Compromise or Other Action by Secretary.--The Secretary may compromise, modify, or remit, with or without conditions, any civil penalty which is or may be imposed under this section.

(e) FORFEITURE.--

(1) In General.--Any vessel (including the vessel's equipment, stores, and cargo) and other item used, and any sanctuary resource taken or retained, in any manner, in connection with or as a result of any violation of this title or of any regulation or permit issued under this title shall be subject to forfeiture to the United States pursuant to a civil proceeding under this subsection. The proceeds from forfeiture actions under this subsection shall constitute a separate recovery in addition to any amounts recovered as civil penalties under this section or as civil damages under section 312. None of those proceeds shall be subject to set-off.

(2) Application of the Customs Laws.--The Secretary may exercise the authority of any United States official granted by any relevant customs law relating to the seizure, forfeiture, condemnation, disposition, remission, and mitigation of property in enforcing this title.

(3) Disposal of Sanctuary Resources.--Any sanctuary resource seized pursuant to this title may be disposed of pursuant to an order of the appropriate court or, if perishable, in a manner prescribed by regulations promulgated by the Secretary. Any proceeds from the sale of such sanctuary resource shall for all purposes represent the sanctuary resource so disposed of in any subsequent legal proceedings.

(4) Presumption.--For the purposes of this section there is a rebuttable presumption that all sanctuary resources found on board a vessel that is used or seized in connection with a violation of this title or of any regulation or permit issued under this title were taken or retained in violation of this title or of a regulation or permit issued under this title.

(f) PAYMENT OF STORAGE, CARE, AND OTHER COSTS.--

(1) Expenditures.--

(A) Notwithstanding any other law, amounts received by the United States as civil penalties, forfeitures of property, and costs imposed under paragraph (2) shall be retained by the Secretary in the manner provided for in section 107(f)(1) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980.

(B) Amounts received under this section for forfeitures and costs imposed under paragraph (2) shall be used to pay the reasonable and necessary costs incurred by the Secretary to provide temporary storage, care, maintenance, and disposal of any sanctuary resource or other property seized in connection with a violation of this title or any regulation or permit issued under this title.

(C) Amounts received under this section as civil penalties and any amounts remaining after the operation of subparagraph (B) shall be used, in order of priority, to--

(i) manage and improve the national marine sanctuary with respect to which the violation occurred that resulted in the penalty or forfeiture;

(ii) pay a reward to any person who furnishes information leading to an assessment of a civil penalty, or to a forfeiture of property, for a violation of this title or any regulation or permit issued under this title; and

(iii) manage and improve any other national marine sanctuary.

(2) **Liability for Costs.**--Any person assessed a civil penalty for a violation of this title or of any regulation or permit issued under this title, and any claimant in a forfeiture action brought for such a violation, shall be liable for the reasonable costs incurred by the Secretary in storage, care, and maintenance of any sanctuary resource or other property seized in connection with the violation.

(g) **SUBPOENAS.**--In the case of any hearing under this section which is determined on the record in accordance with the procedures provided for under section 554 of title 5, United States Code, the Secretary may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, electronic files, and documents, and may administer oaths.

(h) **USE OF RESOURCES OF STATE AND OTHER FEDERAL AGENCIES.**—The Secretary shall, whenever appropriate, use by agreement the personnel, services, and facilities of State and other Federal departments, agencies, and instrumentalities, on a reimbursable or nonreimbursable basis, to carry out the Secretary's responsibilities under this section.

(i) **COAST GUARD AUTHORITY NOT LIMITED.**--Nothing in this section shall be considered to limit the authority of the Coast Guard to enforce this or any other Federal law under section 89 of title 14, United States Code.

(j) **INJUNCTIVE RELIEF.**--If the Secretary determines that there is an imminent risk of destruction or loss of or injury to a sanctuary resource, or that there has been actual destruction

or loss of, or injury to, a sanctuary resource which may give rise to liability under section 312, the Attorney General, upon request of the Secretary, shall seek to obtain such relief as may be necessary to abate such risk or actual destruction, loss, or injury, or to restore or replace the sanctuary resource, or both. The district courts of the United States shall have jurisdiction in such a case to order such relief as the public interest and the equities of the case may require.

(k) AREA OF APPLICATION AND ENFORCEABILITY.--The area of application and enforceability of this title includes the territorial sea of the United States, as described in Presidential Proclamation 5928 of December 27, 1988, which is subject to the sovereignty of the United States, and the United States exclusive economic zone, consistent with international law.

(l) NATIONWIDE SERVICE OF PROCESS.- In any action by the United States under this title, process may be served in any district where the defendant is found, resides, transacts business, or has appointed an agent for the service of process.

Sec. 308. REGULATIONS

The Secretary may issue such regulations as may be necessary to carry out this title.

Sec. 309. RESEARCH, MONITORING, AND EDUCATION

(a) IN GENERAL- The Secretary shall conduct, support, or coordinate research, monitoring, evaluation, and education programs consistent with subsections (b) and (c) and the purposes and policies of this title.

(b) RESEARCH AND MONITORING.-

(1) IN GENERAL.- The Secretary may--

(A) support, promote, and coordinate research on, and long-term monitoring of, sanctuary resources and natural processes that occur in national marine sanctuaries, including exploration, mapping, and environmental and socioeconomic assessment;

(B) develop and test methods to enhance degraded habitats or restore damaged, injured, or lost sanctuary resources; and

(C) support, promote, and coordinate research on, and the conservation, curation, and public display of, the cultural, archeological, and historical resources of national marine sanctuaries.

(2) AVAILABILITY OF RESULTS.- The results of research and monitoring conducted, supported, or permitted by the Secretary under this subsection shall be made available to the public.

(c) EDUCATION-

(1) IN GENERAL.- The Secretary may support, promote, and coordinate efforts to enhance public awareness, understanding, and appreciation of national marine sanctuaries and the System. Efforts supported, promoted, or coordinated under this subsection must emphasize the conservation goals and sustainable public uses of national marine sanctuaries and the System.

(2) EDUCATIONAL ACTIVITIES.- Activities under this subsection may include education of the general public, teachers, students, national marine sanctuary users, and ocean and coastal resource managers.

(d) INTERPRETIVE FACILITIES.-

(1) IN GENERAL.- The Secretary may develop interpretive facilities near any national marine sanctuary.

(2) FACILITY REQUIREMENT.- Any facility developed under this subsection must emphasize the conservation goals and sustainable public uses of national marine sanctuaries by providing the public with information about the conservation, recreational, ecological, historical, cultural, archeological, scientific, educational, or aesthetic qualities of the national marine sanctuary.

(e) CONSULTATION AND COORDINATION.- In conducting, supporting, and coordinating research, monitoring, evaluation, and education programs under subsection (a) and developing interpretive facilities under subsection (d), the Secretary may consult or coordinate with Federal, interstate, or regional agencies, States or local governments.

Sec. 310. SPECIAL USE PERMITS

(a) ISSUANCE OF PERMITS.--The Secretary may issue special use permits which authorize the conduct of specific activities in a national marine sanctuary if the Secretary determines such authorization is necessary--

(1) to establish conditions of access to and use of any sanctuary resource; or

(2) to promote public use and understanding of a sanctuary resource.

(b) PUBLIC NOTICE REQUIRED.- The Secretary shall provide appropriate public notice before identifying any category of activity subject to a special use permit under subsection (a).

(c) PERMIT TERMS.--A permit issued under this section--

(1) shall authorize the conduct of an activity only if that activity is compatible with the purposes for which the sanctuary is designated and with protection of sanctuary resources;

(2) shall not authorize the conduct of any activity for a period of more than 5 years unless renewed by the Secretary;

Appendix IV: National Marine Sanctuaries Act
CBNMS Draft Management Plan

(3) shall require that activities carried out under the permit be conducted in a manner that does not destroy, cause the loss of, or injure sanctuary resources; and

(4) shall require the permittee to purchase and maintain comprehensive general liability insurance, or post an equivalent bond, against claims arising out of activities conducted under the permit and to agree to hold the United States harmless against such claims.

(d) FEES.--

(1) Assessment and Collection.--The Secretary may assess and collect fees for the conduct of any activity under a permit issued under this section.

(2) Amount.--The amount of a fee under this subsection shall be equal to the sum of--

(A) costs incurred, or expected to be incurred, by the Secretary in issuing the permit;

(B) costs incurred, or expected to be incurred, by the Secretary as a direct result of the conduct of the activity for which the permit is issued, including costs of monitoring the conduct of the activity; and

(C) an amount which represents the fair market value of the use of the sanctuary resource.

(3) Use of Fees.--Amounts collected by the Secretary in the form of fees under this section may be used by the Secretary--

(A) for issuing and administering permits under this section; and

(B) for expenses of managing national marine sanctuaries.

(4) WAIVER OR REDUCTION OF FEES.- The Secretary may accept in-kind contributions in lieu of a fee under paragraph (2)(C), or waive or reduce any fee assessed under this subsection for any activity that does not derive a profit from the access to or use of sanctuary resources.

(e) VIOLATIONS.--Upon violation of a term or condition of a permit issued under this section, the Secretary may--

(1) suspend or revoke the permit without compensation to the permittee and without liability to the United States;

(2) assess a civil penalty in accordance with section 307; or

(3) both.

(f) REPORTS.--Each person issued a permit under this section shall submit an annual report to the Secretary not later than December 31 of each year which describes activities conducted under that permit and revenues derived from such activities during the year.

(g) FISHING.--Nothing in this section shall be considered to require a person to obtain a permit under this section for the conduct of any fishing activities in a national marine sanctuary.

Sec. 311. COOPERATIVE AGREEMENTS, DONATIONS, AND ACQUISITIONS

(a) AGREEMENTS AND GRANTS- The Secretary may enter into cooperative agreements, contracts, or other agreements with, or make grants to, States, local governments, regional agencies, interstate agencies, or other persons to carry out the purposes and policies of this title.

(b) AUTHORIZATION TO SOLICIT DONATIONS.--The Secretary may enter into such agreements with any nonprofit organization authorizing the organization to solicit private donations to carry out the purposes and policies of this title.

(c) DONATIONS.--The Secretary may accept donations of funds, property, and services for use in designating and administering national marine sanctuaries under this title. Donations accepted under this section shall be considered as a gift or bequest to or for the use of the United States.

(d) ACQUISITIONS.--The Secretary may acquire by purchase, lease, or exchange, any land, facilities, or other property necessary and appropriate to carry out the purposes and policies of this title

(e) USE OF RESOURCES OF OTHER GOVERNMENT AGENCIES.- The Secretary may, whenever appropriate, enter into an agreement with a State or other Federal agency to use the personnel, services, or facilities of such agency on a reimbursable or nonreimbursable basis, to assist in carrying out the purposes and policies of this title.

(f) AUTHORITY TO OBTAIN GRANTS.- Notwithstanding any other provision of law that prohibits a Federal agency from receiving assistance, the Secretary may apply for, accept, and use grants from other Federal agencies, States, local governments, regional agencies, interstate agencies, foundations, or other persons, to carry out the purposes and policies of this title.

Sec. 312. DESTRUCTION OR LOSS OF, OR INJURY TO, SANCTUARY RESOURCES

(a) LIABILITY FOR INTEREST.--

(1) Liability to UNITED STATES.--Any person who destroys, causes the loss of, or injures any sanctuary resource is liable to the United States for an amount equal to the sum of--

(A) the amount of response costs and damages resulting from the destruction, loss, or injury; and

(B) interests on that amount calculated in the manner described under section 1005 of the Oil Pollution Act of 1990.

(2) Liability In Rem.--Any vessel used to destroy, cause the loss of, or injure any sanctuary resource shall be liable in rem to the United States for response costs and damages resulting from

such destruction, loss, or injury. The amount of that liability shall constitute a maritime lien on the vessel and may be recovered in an action in rem in the district court of the United States having jurisdiction over the vessel.

(3) Defenses.--A person is not liable under this subsection if that person establishes that--

(A) the destruction or loss of, or injury to, the sanctuary resource was caused solely by an act of God, an act of war, or an act or omission of a third party, and the person acted with due care;

(B) the destruction, loss, or injury was caused by an activity authorized by Federal or State law; or

(C) the destruction, loss, or injury was negligible.

(4) Limits to Liability.--Nothing in sections 4281-4289 of the Revised Statutes of the United States or section 3 of the Act of February 13, 1893, shall limit the liability of any person under this title.

(b) RESPONSE ACTIONS AND DAMAGE ASSESSMENT.--

(1) Response Actions.--The Secretary may undertake or authorize all necessary actions to prevent or minimize the destruction or loss of, or injury to, sanctuary resources, or to minimize the imminent risk of such destruction, loss, or injury.

(2) Damage Assessment.--The Secretary shall assess damages to sanctuary resources in accordance with section 302(6).

(c) CIVIL ACTIONS FOR RESPONSE COSTS AND DAMAGES.--

(1) The Attorney General, upon request of the Secretary, may commence a civil action against any person or vessel who may be liable under subsection (a) for response costs and damages. The Secretary, acting as trustee for sanctuary resources for the United States, shall submit a request for such an action to the Attorney General whenever a person may be liable for such costs or damages.

(2) An action under this subsection may be brought in the United States district court for any district in which--

(A) the defendant is located, resides, or is doing business, in the case of an action against a person;

(B) the vessel is located, in the case of an action against a vessel; or

(C) the destruction of, loss of, or injury to a sanctuary resource occurred.

(d) **USE OF RECOVERED AMOUNTS.**--Response costs and damages recovered by the Secretary under this section shall be retained by the Secretary in the manner provided for in section 107(f)(1) of the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 9607(f)(1)), and used as follows:

(1) **RESPONSE COSTS.**--Amounts recovered by the United States for costs of response actions and damage assessments under this section shall be used, as the Secretary considers appropriate--

(A) to reimburse the Secretary or any other Federal or State agency that conducted those activities; and

(B) after reimbursement of such costs, to restore, replace, or acquire the equivalent of any sanctuary resource.

(2) **OTHER AMOUNTS.**--All other amounts recovered shall be used, in order of priority--

(A) to restore, replace, or acquire the equivalent of the sanctuary resources that were the subject of the action, including for costs of monitoring and the costs of curation and conservation of archeological, historical, and cultural sanctuary resources;

(B) to restore degraded sanctuary resources of the national marine sanctuary that was the subject of the action, giving priority to sanctuary resources and habitats that are comparable to the sanctuary resources that were the subject of the action; and

(C) to restore degraded sanctuary resources of other national marine sanctuaries.

(3) **Federal-State Coordination.**--Amounts recovered under this section with respect to sanctuary resources lying within the jurisdiction of a State shall be used under paragraphs (2)(A) and (B) in accordance with the court decree or settlement agreement and an agreement entered into by the Secretary and the Governor of that State.

(e) **STATUTE OF LIMITATIONS.**--An action for response costs or damages under subsection (c) shall be barred unless the complaint is filed within 3 years after the date on which the Secretary completes a damage assessment and restoration plan for the sanctuary resources to which the action relates.

SEC. 313. AUTHORIZATION OF APPROPRIATIONS

There are authorized to be appropriated to the Secretary--

(1) to carry out this title--

(A) \$32,000,000 for fiscal year 2001;

(B) \$34,000,000 for fiscal year 2002;

(C) \$36,000,000 for fiscal year 2003;

(D) \$38,000,000 for fiscal year 2004;

(E) \$40,000,000 for fiscal year 2005; and

(2) for construction projects at national marine sanctuaries, \$6,000,000 for each of fiscal years 2001, 2002, 2003, 2004, and 2005.

Sec. 314. U.S.S. MONITOR ARTIFACTS AND MATERIALS

(a) CONGRESSIONAL POLICY.--In recognition of the historical significance of the wreck of the United States ship Monitor to coastal North Carolina and to the area off the coast of North Carolina known as the Graveyard of the Atlantic, the Congress directs that a suitable display of artifacts and materials from the United States ship Monitor be maintained permanently at an appropriate site in coastal North Carolina. [P.L. 102-587 authorized a grant for the acquisition of space in Hatteras Village, NC, for display of artifacts and administration and operations of the Monitor National Marine Sanctuary.

(b) DISCLAIMER.--This section shall not affect the following:

(1) Responsibilities Of Secretary.--The responsibilities of the Secretary to provide for the protection, conservation, and display of artifacts and materials from the United States ship Monitor.

(2) Authority Of Secretary.--The authority of the Secretary to designate the Mariner's Museum, located at Newport News, Virginia, as the principal museum for coordination of activities referred to in paragraph (1).

Sec. 315. ADVISORY COUNCILS

(a) ESTABLISHMENT.--The Secretary may establish one or more advisory councils (in this section referred to as an 'Advisory Council') to advise and make recommendations to the Secretary regarding the designation and management of national marine sanctuaries. The Advisory Councils shall be exempt from the Federal Advisory Committee Act.

(b) MEMBERSHIP.--Members of the Advisory Councils may be appointed from among--

(1) persons employed by Federal or State agencies with expertise in management of natural resources;

(2) members of relevant Regional Fishery Management Councils established under section 302 of the Magnuson-Stevens Act; and

(3) representatives of local user groups, conservation and other public interest organizations, scientific organizations, educational organizations, or others interested in the protection and multiple use management of sanctuary resources.

(c) LIMITS ON MEMBERSHIP.--For sanctuaries designated after the date of enactment of the National Marine Sanctuaries Program Amendments Act of 1992, the membership of Advisory Councils shall be limited to no more than 15 members.

(d) STAFFING AND ASSISTANCE.--The Secretary may make available to an Advisory Council any staff, information, administrative services, or assistance the Secretary determines are reasonably required to enable the Advisory Council to carry out its functions.

(e) PUBLIC PARTICIPATION AND PROCEDURAL MATTERS.--The following guidelines apply with respect to the conduct of business meetings of an Advisory Council:

(1) Each meeting shall be open to the public, and interested persons shall be permitted to present oral or written statements on items on the agenda.

(2) Emergency meetings may be held at the call of the chairman or presiding officer.

(3) Timely notice of each meeting, including the time, place, and agenda of the meeting, shall be published locally and in the Federal Register, except that in the case of a meeting of an Advisory Council established to provide assistance regarding any individual national marine sanctuary the notice is not required to be published in the Federal Register.

(4) Minutes of each meeting shall be kept and contain a summary of the attendees and matters discussed.

Sec. 316. ENHANCING SUPPORT FOR NATIONAL MARINE SANCTUARIES

(a) AUTHORITY.--The Secretary may establish a program consisting of--

(1) the creation, adoption, and publication in the Federal Register by the Secretary of a symbol for the national marine sanctuary program, or for individual national marine sanctuaries or the System;

(2) the solicitation of persons to be designated as official sponsors of the national marine sanctuary program or of individual national marine sanctuaries;

(3) the designation of persons by the Secretary as official sponsors of the national marine sanctuary program or of individual sanctuaries;

(4) the authorization by the Secretary of the manufacture, reproduction, or other use of any symbol published under paragraph (1), including the sale of items bearing such a symbol, by

official sponsors of the national marine sanctuary program or of individual national marine sanctuaries;

(5) the creation, marketing, and selling of products to promote the national marine sanctuary program, and entering into exclusive or nonexclusive agreements authorizing entities to create, market or sell on the Secretary's behalf;

(6) the solicitation and collection by the Secretary of monetary or in-kind contributions from official sponsors for the manufacture, reproduction or use of the symbols published under paragraph (1);

(7) the retention of any monetary or in-kind contributions collected under paragraphs (5) and (6) by the Secretary; and

(8) the expenditure and use of any monetary and in-kind contributions, without appropriation, by the Secretary to designate and manage national marine sanctuaries.

Monetary and in-kind contributions raised through the sale, marketing, or use of symbols and products related to an individual national marine sanctuary shall be used to support that sanctuary.

(b) **CONTRACT AUTHORITY.**--The Secretary may contract with any person for the creation of symbols or the solicitation of official sponsors under subsection (a).

(c) **RESTRICTIONS.**--The Secretary may restrict the use of the symbols published under subsection (a), and the designation of official sponsors of the national marine sanctuary program or of individual national marine sanctuaries to ensure compatibility with the goals of the national marine sanctuary program.

(d) **PROPERTY OF UNITED STATES.**-- Any symbol which is adopted by the Secretary and published in the Federal Register under subsection (a) is deemed to be the property of the United States.

(e) **PROHIBITED ACTIVITIES.**--It is unlawful for any person--

(1) designated as an official sponsor to influence or seek to influence any decision by the Secretary or any other Federal official related to the designation or management of a national marine sanctuary, except to the extent that a person who is not so designated may do so;

(2) to represent himself or herself to be an official sponsor absent a designation by the Secretary;

(3) to manufacture, reproduce, or otherwise use any symbol adopted by the Secretary under subsection (a)(1), including to sell any item bearing such a symbol, unless authorized by the Secretary under subsection (a)(4) or subsection (f); or

(4) to violate any regulation promulgated by the Secretary under this section.

(f) **COLLABORATIONS.**--The Secretary may authorize the use of a symbol adopted by the Secretary under subsection (a)(1) by any person engaged in a collaborative effort with the Secretary to carry out the purposes and policies of this title and to benefit a national marine sanctuary or the System.

(g) **AUTHORIZATION FOR NON-PROFIT PARTNER ORGANIZATION TO SOLICIT SPONSORS.**--

(1) **IN GENERAL.**--The Secretary may enter into an agreement with a non-profit partner organization authorizing it to assist in the administration of the sponsorship program established under this section. Under an agreement entered into under this paragraph, the Secretary may authorize the non-profit partner organization to solicit persons to be official sponsors of the national marine sanctuary system or of individual national marine sanctuaries, upon such terms as the Secretary deems reasonable and will contribute to the successful administration of the sanctuary system. The Secretary may also authorize the non-profit partner organization to collect the statutory contribution from the sponsor, and, subject to paragraph (2), transfer the contribution to the Secretary.

(2) **REIMBURSEMENT FOR ADMINISTRATIVE COSTS.**--Under the agreement entered into under paragraph (1), the Secretary may authorize the non-profit partner organization to retain not more than 5 percent of the amount of monetary contributions it receives from official sponsors under the agreement to offset the administrative costs of the organization in soliciting sponsors.

(3) **PARTNER ORGANIZATION DEFINED.**--In this subsection, the term 'partner organization' means an organization that--

(A) draws its membership from individuals, private organizations, corporation, academic institutions, or State and local governments; and

(B) is established to promote the understanding of, education relating to, and the conservation of the resources of a particular sanctuary or 2 or more related sanctuaries.

Sec. 318. DR. NANCY FOSTER SCHOLARSHIP PROGRAM

(a) **ESTABLISHMENT.**--The Secretary shall establish and administer through the National Ocean Service the Dr. Nancy Foster Scholarship Program. Under the program, the Secretary shall award graduate education scholarships in oceanography, marine biology or maritime archeology, to be known as Dr. Nancy Foster Scholarships.

(b) **PURPOSES.**--The purposes of the Dr. Nancy Foster Scholarship Program are--

(1) to recognize outstanding scholarship in oceanography, marine biology, or maritime archeology, particularly by women and members of minority groups; and

***Appendix IV: National Marine Sanctuaries Act
CBNMS Draft Management Plan***

(2) to encourage independent graduate level research in oceanography, marine biology, or maritime archeology.

(c) AWARD.--Each Dr. Nancy Foster Scholarship--

(1) shall be used to support graduate studies in oceanography, marine biology, or maritime archeology at a graduate level institution of higher education; and

(2) shall be awarded in accordance with guidelines issued by the Secretary.

(d) DISTRIBUTION OF FUNDS.--The amount of each Dr. Nancy Foster Scholarship shall be provided directly to a recipient selected by the Secretary upon receipt of certification that the recipient will adhere to a specific and detailed plan of study and research approved by a graduate level institution of higher education.

(e) FUNDING.--Of the amount available each fiscal year to carry out this title, the Secretary shall award 1 percent as Dr. Nancy Foster Scholarships.

(f) SCHOLARSHIP REPAYMENT REQUIREMENT.--The Secretary shall require an individual receiving a scholarship under this section to repay the full amount of the scholarship to the Secretary if the Secretary determines that the individual, in obtaining or using the scholarship, engaged in fraudulent conduct or failed to comply with any term or condition of the scholarship.

(g) MARITIME ARCHEOLOGY DEFINED.--In this section the term 'maritime archeology' includes the curation, preservation, and display of maritime artifacts.

Appendix V: Species List

This appendix includes species lists of marine vertebrates (birds, mammals, fish, and reptiles), invertebrates, and algae occurring in CBNMS.

The following lists of species occurring in CBNMS have been compiled from verified species lists collected from research and monitoring cruises conducted within CBNMS or from specimens curated in collections at the California Academy of Sciences or the Smithsonian. Scientific names have been verified through the World Register of Marine Species (WoRMS). The lists include Federal listed status, estimated population size (when known), and geographical distribution (when known). All of the lists include the following headings (except for Federal listed status for invertebrates and algae):

COMMON NAME - The common (English) name of the species.

SCIENTIFIC NAME - The scientific (Latin) name of the species.

FS – The Federal listed status as of January 2014 (as found at <http://www.fws.gov/endangered/>). These designations are given if any population or subspecies occurring in the sanctuary is so listed.

- E – Endangered
- T – Threatened
- SC – Species of Concern: may be endangered or threatened; not enough information has been gathered to support listing at this time.
- C – Candidate: to become a proposed species for listing as endangered or threatened.
- D – Delisted; to be monitored for 5 years.

The bird, mammal, and reptile lists also include the following headings:

POPEST – The estimated population size in a given location (LOCA, see below). When numbers are given they represent 1000s of individuals.

LOCA - The geographic location (area) for which the population estimate applies, as follows:

- World – World
- N.Am – North America
- Pacif – Pacific Ocean or Pacific North American Coast
- Calif – California

Appendix V: Species List
CBNMS Draft Management Plan

VERTEBRATES

BIRDS

The bird species list was compiled from verified observations from the Cordell Bank Ocean Monitoring Program (CBOMP) and the Applied California Current Ecosystem Studies (ACCESS) partnership, as well as from expert observations, per Rich Stallcup, Steve Howell, and Peter Pyle. When no population estimates were available, the terms "Common," "Uncommon," and "Rare" were used as general indicators of the worldwide population size.

Birds				
COMMON NAME	SCIENTIFIC NAME	FED. STATUS	POP. ESTIMATE	LOCATION OF POP. EST
Red-throated Loon	<i>Gavia stellata</i>		25	N.Am
Pacific Loon	<i>Gavia pacifica</i>		50	World
Common Loon	<i>Gavia immer</i>	SC	500	N.Am
Red-necked Grebe	<i>Podiceps grisegena</i>		45	N.Am
Laysan Albatross	<i>Phoebastria immutabilis</i>		2600	World
Black-footed Albatross	<i>Phoebastria nigripes</i>		200	World
Short-tailed Albatross	<i>Phoebastria albatrus</i>	E	1	World
Light-mantled Albatross	<i>Phoebastria palpebrata</i>		50	World
Shy Albatross	<i>Thalassarche cauta</i>		15	World
Northern Fulmar	<i>Fulmarus glacialis</i>		1400	Pacif
Murphy's Petrel	<i>Pterodroma ultima</i>		Uncommon	
Mottled Petrel	<i>Pterodroma inexpectata</i>		Uncommon	
Dark-rumped Petrel	<i>Pterodroma phaeopygia</i>	E	70	World
Pink-footed Shearwater	<i>Puffinus creatopus</i>		Common	
Flesh-footed Shearwater	<i>Puffinus carneipes</i>		Uncommon	
Buller's Shearwater	<i>Puffinus bulleri</i>		Uncommon	
Sooty Shearwater	<i>Puffinus griseus</i>		Common	
Short-tailed Shearwater	<i>Puffinus tenuirostris</i>		Common	
Greater Shearwater	<i>Puffinus gravis</i>		Common	
Manx Shearwater	<i>Puffinus puffinus</i>		1000	World
Black-vented Shearwater	<i>Puffinus opisthomelas</i>		30	World
Cook's Petrel	<i>Pterodroma cookii</i>		1200	World
Mottled Petrel	<i>Pterodroma inexpectata</i>		Uncommon	
Dark-rumped Petrel	<i>Pterodroma phaeopygia</i>	T	Uncommon	
Murphy's Petrel	<i>Pterodroma ultima</i>		Uncommon	
Wilson's Storm-Petrel	<i>Oceanites oceanicus</i>		Common	
Fork-tailed Storm-Petrel	<i>Oceanodroma furcata</i>		1	Calif

Appendix V: Species List
CBNMS Draft Management Plan

Birds				
COMMON NAME	SCIENTIFIC NAME	FED. STATUS	POP. ESTIMATE	LOCATION OF POP. EST
Leach's Storm-Petrel	<i>Oceanodroma leucorhoa</i>		20	Calif
Ashy Storm-Petrel	<i>Oceanodroma homochroa</i>	SC	7.5	Calif
Black Storm-Petrel	<i>Oceanodroma melania</i>		Uncommon	
Least Storm-Petrel	<i>Oceanodroma microsoma</i>		100	World
Brown Pelican	<i>Pelecanus occidentalis</i>	D	150	Pacif
Brandt's Cormorant	<i>Phalacrocorax penicillatus</i>		125	Calif
Double-crested Cormorant	<i>Phalacrocorax auritus</i>		10	Calif
Pelagic Cormorant	<i>Phalacrocorax pelagicus</i>		25	Calif
Magnificent Frigatebird	<i>Fregata magnificens</i>		Common	
Brant	<i>Branta bernicla</i>		50	Pacif
Surf Scoter	<i>Melanitta perspicillata</i>		536	Pacif
Black Scoter	<i>Melanitta nigra</i>		Common	
Red-necked Phalarope	<i>Phalaropus lobatus</i>		2500	N.Am
Red Phalarope	<i>Phalaropus fulicaria</i>		1000	N.Am
South Polar Skua	<i>Catharacta maccormicki</i>		Uncommon	
Pomarine Jaeger	<i>Stercorarius pomarinus</i>		Common	
Parasitic Jaeger	<i>Stercorarius parasiticus</i>		Common	
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>		250	World
Bonaparte's Gull	<i>Larus philadelphia</i>		Uncommon	
Heermann's Gull	<i>Larus heermanni</i>		1500	World
Mew Gull	<i>Larus canus</i>		Uncommon	
California Gull	<i>Larus californicus</i>		Common	
Herring Gull	<i>Larus argentatus</i>		500	N.Am
Thayer's Gull	<i>Larus thayeri</i>		Uncommon	
Western Gull	<i>Larus occidentalis</i>		60	Calif
Glaucous-winged Gull	<i>Larus glaucescens</i>		200	N.Am
Glaucous Gull	<i>Larus hyperboreus</i>		Uncommon	
Sabine's Gull	<i>Xema sabini</i>		Uncommon	
Black-legged Kittiwake	<i>Rissa tridactyla</i>		2600	Pacif
Caspian Tern	<i>Sterna caspia</i>		35	N.Am
Elegant Tern	<i>Sterna elegans</i>		29	World
Common Tern	<i>Sterna hirundo</i>		100	N.Am
Arctic Tern	<i>Sterna paradisaea</i>		Common	
Forster's Tern	<i>Sterna forsteri</i>		400	World
Sooty Tern	<i>Sterna fuscata</i>		2100	World
Common Murre	<i>Uria aalge</i>		800	Calif
Pigeon Guillemot	<i>Cephus columba</i>		30	Calif
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	T	6.5	Calif
Scripps's Murrelet	<i>Synthliboramphus scrippsi</i>	SC	8	World
Ancient Murrelet	<i>Synthliboramphus antiquus</i>		1200	World

Appendix V: Species List
CBNMS Draft Management Plan

Birds				
COMMON NAME	SCIENTIFIC NAME	FED. STATUS	POP. ESTIMATE	LOCATION OF POP. EST
Cassin's Auklet	<i>Ptychoramphus aleuticus</i>	SC	75	Calif
Rhinoceros Auklet	<i>Cerorhinca monocerata</i>		5	Calif
Horned Puffin	<i>Fratercula corniculata</i>		Common	
Tufted Puffin	<i>Fratercula cirrhata</i>		0.7	Calif

MAMMALS

The mammal species list was compiled from verified observations from the CBOMP and the ACCESS partnership.

Mammals				
COMMON NAME	SCIENTIFIC NAME	FED. STATUS	POP. ESTIMATE	LOCATION OF POP. EST
Blue Whale	<i>Balaenoptera musculus</i>	E	2	Pacif
Fin Whale	<i>Balaenoptera physalus</i>	E	1.2	C,O,W
Minke Whale	<i>Balaenoptera acutorostrata</i>		0.6	Calif
Humpback Whale	<i>Megaptera novaeangliae</i>	E	6	Pacif
Gray Whale	<i>Eschrichtius robustus</i>	D	26	World
Harbor Porpoise	<i>Phocoena phocoena</i>		16.7	Cent-No. Calif
Dall's Porpoise	<i>Phocoenoides dalli</i>		117.5	C,O,W
Pacific White-sided Dolphin	<i>Lagenorhynchus obliquidens</i>		25.8	C,O, W
Northern Right Whale Dolphin	<i>Lissodelphis borealis</i>		13.7	C,O, W
Risso's Dolphin	<i>Grampus griseus</i>		16.5	C,O,W
Killer Whale	<i>Orcinus orca</i>	E ⁶	1	C,O,W
Sperm Whale	<i>Physeter macrocephalus</i>	E	1800	World
Steller Sea Lion	<i>Eumetopius jubatus</i>		0.4	Calif
California Sea Lion	<i>Zalophus californianus</i>		214	C,O,W
Northern Fur Seal	<i>Callorhinus ursinus</i>		4.3	Calif
Northern Elephant Seal	<i>Mirounga angustirostris</i>		84	Calif

⁶ In 2006, the Distinct Population Segment (DPS) of southern killer whales (*Orcinus orca*) was designated as Endangered under the MMPA and ESA. Recent anecdotal information provides information that some of the migratory and feeding killer whales within GFNMS, CBNMS, and MBNMS may be part of this DPS and therefore have been noted as Endangered in the CBNMS species inventory.

Mammals				
COMMON NAME	SCIENTIFIC NAME	FED. STATUS	POP. ESTIMATE	LOCATION OF POP. EST
Harbor Seal	<i>Phoca vitulina</i>		28	Calif
Harbor Porpoise	<i>Phocoena phocoena</i>		24	Calif

FISH

The fish species list was compiled from verified observations from the *Delta* submersible, ROVs and a towed camera sled, as well as collections from NMFS bottom trawl, mid-water trawl, and hook and line surveys.

Fish		
COMMON NAME	SCIENTIFIC NAME	FED. STATUS
Giant Grenadier	<i>Albatrossia pectoralis</i>	
California Slickhead	<i>Alepocephalus tenebrosus</i>	
Whitebait Smelt	<i>Allosmerus elongatus</i>	
American Shad	<i>Alosa sapidissima</i>	
Pacific Sand Lance	<i>Ammodytes hexapterus</i>	
Wolf-eel	<i>Anarrhichthys ocellatus</i>	
Fangtooth	<i>Anoplogaster cornuta</i>	
Sablefish	<i>Anoplopoma fimbria</i>	
Pacific Flatnose	<i>Antimora microlepis</i>	
Brown Cat Shark	<i>Apristurus brunneus</i>	
Longnose Cat Shark	<i>Apristurus kampae</i>	
Pacific Argentine	<i>Argentina sialis</i>	
Coralline Sculpin	<i>Artedius corallinus</i>	
Arrowtooth Flounder	<i>Atheresthes stomias</i>	
Highfin Dragonfish	<i>Bathophilus flemingi</i>	
Snubnose Blacksmelt	<i>Bathylagoides wesethi</i>	
Blackfin Poacher	<i>Bathyagonus nigripinnis</i>	
Pacific Blacksmelt	<i>Bathylagus pacificus</i>	
Deepsea Skate	<i>Bathyraja abyssicola</i>	
Sandpaper Skate	<i>Bathyraja interrupta</i>	
Roughtail Skate	<i>Bathyraja trachura</i>	
Twoline Eelpout	<i>Bothrocara brunneum</i>	
Shortsnout Eelpout	<i>Bothrocara molle</i>	
Red Brotula	<i>Brosmophycis marginata</i>	
Snailfish	<i>Careproctus cypselurus</i>	

Appendix V: Species List
CBNMS Draft Management Plan

Fish		
COMMON NAME	SCIENTIFIC NAME	FED. STATUS
Blacktail Snailfish	<i>Careproctus melanurus</i>	
Ocean Whitefish	<i>Caulolatilus princeps</i>	
Dogtooth Lampfish	<i>Ceratoscopelus townsendi</i>	
Pacific Viperfish	<i>Chauliodus macouni</i>	
Spotted Cusk-eel	<i>Chilara taylori</i>	
Mosshead Warbonnet	<i>Chirolophis nugator</i>	
Pacific Sanddab	<i>Citharichthys sordidus</i>	
Speckled Sanddab	<i>Citharichthys stigmaeus</i>	
Pacific Herring	<i>Clupea pallasii pallasii</i>	
Shoulderspot Grenadier	<i>Coelorinchus scaphopsis</i>	
Pacific Saury	<i>Cololabis saira</i>	
Pacific Grenadier	<i>Coryphaenoides acrolepis</i>	
Small-Toothed Bristlemouth	<i>Cyclothone microdon</i>	
Shiner Perch	<i>Cymatogaster aggregata</i>	
California Headlightfish	<i>Diaphus theta</i>	
Blackbelly Snailfish	<i>Elassodiscus caudatus</i>	
Deepsea Sole	<i>Embassichthys bathybius</i>	
Northern Anchovy	<i>Engraulis mordax</i>	
Petrale Sole	<i>Eopsetta jordani</i>	
Black Hagfish	<i>Eptatretus deani</i>	
Pacific Hagfish	<i>Eptatretus stoutii</i>	
Pacific Cod	<i>Gadus macrocephalus</i>	
White Croaker	<i>Genyonemus lineatus</i>	
Rex Sole	<i>Glyptocephalus zachirus</i>	
Brown Irish Lord	<i>Hemilepidotus spinosus</i>	
Kelp Greenling	<i>Hexagrammos decagrammus</i>	
Bluntnose Sixgill Shark	<i>Hexanchus griseus</i>	
Flathead Sole	<i>Hippoglossoides elassodon</i>	
Pacific Halibut	<i>Hippoglossus stenolepis</i>	
Spotted Ratfish	<i>Hydrolagus colliei</i>	
Spotfin Surfperch	<i>Hyperprosopon anale</i>	
Surf Smelt	<i>Hypomesus pretiosus</i>	
Diamond Turbot	<i>Hypsopsetta guttulata</i>	
Rainbow Surfperch	<i>Hypsurus caryi</i>	
Threadfin Sculpin	<i>Icelinus filamentosus</i>	
Spotfin Sculpin	<i>Icelinus tenuis</i>	
Medusafish	<i>Icichthys lockingtoni</i>	
Ragfish	<i>Icesteus aenigmaticus</i>	
Pacific Blackdragon	<i>Idiacanthus antrostomus</i>	
Butter Sole	<i>Isopsetta isolepis</i>	
Shortfin Mako	<i>Isurus oxyrinchus</i>	
Longfin Sculpin	<i>Jordania zonope</i>	

Appendix V: Species List
CBNMS Draft Management Plan

Fish		
COMMON NAME	SCIENTIFIC NAME	FED. STATUS
Salmon Shark	<i>Lamna ditropis</i>	
Brokenline Lanternfish	<i>Lampanyctus jordani</i>	
Bay Goby	<i>Lepidogobius lepidus</i>	
Rock Sole	<i>Lepidopsetta bilineata</i>	
Staghorn Sculpin	<i>Leptocottus armatus</i>	
Slender Barracudina	<i>Lestidiops ringens</i>	
Northern Smoothtongue	<i>Leuroglossus schmidtii</i>	
California Smoothtongue	<i>Leuroglossus stilbius</i>	
Eared Blacksmelt	<i>Lipolagus ochotensis</i>	
Snakehead Eelpout	<i>Lycenchelys crotalinus</i>	
Blackmouth Eelpout	<i>Lycodapus fierasfer</i>	
Bigfin Eelpout	<i>Lycodes cortezianus</i>	
Black Eelpout	<i>Lycodes diapterus</i>	
Blackbelly Eelpout	<i>Lycodes pacificus</i>	
Bearded Eelpout	<i>Lyconema barbatum</i>	
Slender Sole	<i>Lyopsetta exilis</i>	
Pacific Hake	<i>Merluccius productus</i>	
Pacific Tomcod	<i>Microgadus proximus</i>	
Dover Sole	<i>Microstomus pacificus</i>	
Ocean Sunfish	<i>Mola mola</i>	
Brown Smoothhound	<i>Mustelus henlei</i>	
Pinpoint Lampfish	<i>Nannobranchium regale</i>	
Broadfin Lampfish	<i>Nannobranchium ritteri</i>	
California Grenadier	<i>Nezumia stelgidolepis</i>	
Pygmy Poacher	<i>Odontopyxis trispinosa</i>	
Coho Salmon (Silver Salmon)	<i>Oncorhynchus kisutch</i>	E & T regional
Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	E & T regional
Lingcod	<i>Ophiodon elongatus</i>	
Painted Greenling	<i>Oxylebius pictus</i>	
California Halibut	<i>Paralichthys californicus</i>	
Red Snailfish	<i>Paraliparis dactylosus</i>	
Filetail Cat Shark	<i>Parmaturus xaniurus</i>	
English Sole	<i>Parophrys vetulus</i>	
Pacific Pompano	<i>Peprilus simillimus</i>	
Starry Flounder	<i>Platichthys stellatus</i>	
Bluebarred Prickleback	<i>Plectobranhus evides</i>	
Curlfin Sole	<i>Pleuronichthys decurrens</i>	
Hornyhead Turbot	<i>Pleuronichthys verticalis</i>	
Sturgeon Poacher	<i>Podothecus accipenserinus</i>	

Appendix V: Species List
CBNMS Draft Management Plan

Fish		
COMMON NAME	SCIENTIFIC NAME	FED. STATUS
Plainfin Midshipman	<i>Porichthys notatus</i>	
Blue Shark	<i>Prionace glauca</i>	
Bigeye Lanternfish	<i>Protomyctophum thompsoni</i>	
Sand Sole	<i>Psettichthys melanostictus</i>	
Stout Blacksmelt	<i>Pseudobathylagus milleri</i>	
Slim Sculpin	<i>Radulinus asprellus</i>	
Big Skate	<i>Raja binoculata</i>	
California Skate	<i>Raja inornata</i>	
Longnose Skate	<i>Raja rhina</i>	
Starry Skate	<i>Raja stellulata</i>	
Blackeye Goby	<i>Rhinogobiops nicholsii</i>	
Puget Sound Sculpin	<i>Ruscarius meanyi</i>	
Pacific Sardine	<i>Sardinops sagax</i>	
Pacific Mackerel	<i>Scomber japonicus</i>	
Cabazon	<i>Scorpaenichthys marmoratus</i>	
Rougheye Rockfish	<i>Sebastes aleutianus</i>	
Pacific Ocean Perch	<i>Sebastes alutus</i>	
Brown Rockfish	<i>Sebastes auriculatus</i>	
Aurora Rockfish	<i>Sebastes aurora</i>	
Redbanded Rockfish	<i>Sebastes babcocki</i>	
Gopher Rockfish	<i>Sebastes carnatus</i>	
Copper Rockfish	<i>Sebastes caurinus</i>	
Greenspotted Rockfish	<i>Sebastes chlorostictus</i>	
Starry Rockfish	<i>Sebastes constellatus</i>	
Darkblotched Rockfish	<i>Sebastes crameri</i>	
Splitnose Rockfish	<i>Sebastes diploproa</i>	
Greenstriped Rockfish	<i>Sebastes elongatus</i>	
Swordspine Rockfish	<i>Sebastes ensifer</i>	
Widow Rockfish	<i>Sebastes entomelas</i>	
Pink Rockfish	<i>Sebastes eos</i>	
Yellowtail Rockfish	<i>Sebastes flavidus</i>	
Chilipepper	<i>Sebastes goodei</i>	
Rosethorn Rockfish	<i>Sebastes helvomaculatus</i>	
Squarespot Rockfish	<i>Sebastes hopkinsi</i>	
Shortbelly Rockfish	<i>Sebastes jordani</i>	
Cowcod	<i>Sebastes levis</i>	
Quillback Rockfish	<i>Sebastes maliger</i>	
Black Rockfish	<i>Sebastes melanops</i>	
Blackgill Rockfish	<i>Sebastes melanostomus</i>	
Vermilion Rockfish	<i>Sebastes miniatus</i>	
Blue Rockfish	<i>Sebastes mystinus</i>	
China Rockfish	<i>Sebastes nebulosus</i>	
Tiger Rockfish	<i>Sebastes nigrocinctus</i>	

Fish		
COMMON NAME	SCIENTIFIC NAME	FED. STATUS
Speckled Rockfish	<i>Sebastes ovalis</i>	
Bocaccio	<i>Sebastes paucispinis</i>	
Canary Rockfish	<i>Sebastes pinniger</i>	
Redstripe Rockfish	<i>Sebastes proriger</i>	
Rosy Rockfish	<i>Sebastes rosaceus</i>	
Greenblotched Rockfish	<i>Sebastes rosenblatti</i>	
Yelloweye Rockfish	<i>Sebastes ruberrimus</i>	
Flag Rockfish	<i>Sebastes rubrivinctus</i>	
Bank Rockfish	<i>Sebastes rufus</i>	
Stripetail Rockfish	<i>Sebastes saxicola</i>	
Halfbanded Rockfish	<i>Sebastes semicinctus</i>	
Olive Rockfish	<i>Sebastes serranoides</i>	
Pygmy Rockfish	<i>Sebastes wilsoni</i>	
Sharpchin Rockfish	<i>Sebastes zacentrus</i>	
Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	
Longspine Thornyhead	<i>Sebastolobus altivelis</i>	
Spiny Dogfish	<i>Squalus acanthias</i>	
Northern Lampfish	<i>Stenobrachius leucopsarus</i>	
California Lanternfish	<i>Symbolophorus californiensis</i>	
California Tonguefish	<i>Symphurus atricaudus</i>	
Longfin Dragonfish	<i>Tactostoma macropus</i>	
Threadfin Slickhead	<i>Talismania bifurcata</i>	
Blue Lanternfish	<i>Tarletonbeania crenularis</i>	
Eulachon	<i>Thaleichthys pacificus</i>	
Albacore	<i>Thunnus alalunga</i>	
Pacific Electric Ray	<i>Torpedo californica</i>	
King-of-the-Salmon	<i>Trachipterus altivelis</i>	
Jack Mackerel	<i>Trachurus symmetricus</i>	
Blacktip Poacher	<i>Xeneretmus latifrons</i>	
Smootheye Poacher	<i>Xeneretmus leiops</i>	
Bluespotted Poacher	<i>Xeneretmus triacanthus</i>	
Pink Surfperch	<i>Zalembius rosaceus</i>	
Shortspine Combfish	<i>Zaniolepis frenata</i>	
Longspine Combfish	<i>Zaniolepis latipinnis</i>	

Appendix V: Species List
CBNMS Draft Management Plan

REPTILES

No population estimate was available, so the term "Rare" was used as a general indicator of the worldwide population size.

Reptiles				
COMMON NAME	SCIENTIFIC NAME	FED. STATUS	POP. ESTIMATE	LOCATION OF POP. EST
Leatherback Turtle	<i>Dermochelys coriacea</i>	E	Rare	World

INVERTEBRATES

The invertebrate species list was compiled from verified observations from the *Delta* submersible, ROVs and a towed camera sled, collections from Cordell Expeditions, NOAA divers, ACCESS, and specimens curated in collections at the California Academy of Sciences or the Smithsonian. None of the species have federal status under the Endangered Species Act, and population estimates are not available.

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
	Kingdom Monera
bacterial mat	<i>Beggiatoa spp.</i>
	Kingdom Animalia
	Porifera
red volcano sponge	<i>Acarnus erithacus</i>
sponge	<i>Antho lithophoenix</i>
glass sponge	<i>Aphrocallistes vastus</i>
predatory sponge	<i>Asbestopluma</i>
sponge	<i>Clathria microjoanna</i>
sponge	<i>Clathria spongigartina</i>
sponge	<i>Endectyon hyle</i>
sponge	<i>Forcepia (Forcepia) elvini</i>
sponge	<i>Geodia agassizi</i>
sponge	<i>Geodia gibberosa</i>
sponge	<i>Geodia mesotriaena</i>
sponge	<i>Guitarra abbotti</i>
bread crumb sponge	<i>Halichondria panicea</i>
sponge	<i>Haliclona textapatina</i>
sponge	<i>Hymeniacidon sinapium</i>

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
sponge	<i>Iophon lamella</i>
sponge	<i>Iophon nigricans</i>
sponge	<i>Leucandra heathi</i>
sponge	<i>Leucandra losangelensis</i>
sponge	<i>Lissodendoryx firma</i>
sponge	<i>Lissodendoryx kyma</i>
sponge	<i>Mycale adhaerens</i>
sponge	<i>Mycale lingua</i>
sponge	<i>Mycale psila</i>
sponge	<i>Mycale toporoki</i>
sponge	<i>Myxilla incrustans</i>
sponge	<i>Myxilla parasitica</i>
sponge	<i>Neopetrosia problematica</i>
sponge	<i>Neopetrosia zumi</i>
sponge	<i>Penares cortius</i>
sponge	<i>Poecillastra rickettsi</i>
aggregate vase sponge	<i>Polymastia pachymastia</i>
sponge	<i>Sidonops bicolor</i>
gray moon sponge	<i>Spheciospongia confoederata</i>
white sponge	<i>Stelletta clarella</i>
sponge	<i>Stelletta estrella</i>
sponge	<i>Tedania gurjanovae</i>
sponge	<i>Tethya californiana</i>
sponge	<i>Xestospongia diprosopia</i>
sponge	<i>Xestospongia edapha</i>
	Cnidaria
anemone	<i>Actinauge verrilli</i>
siphonophore	<i>Agalma elegans</i>
pink helmet	<i>Aglantha digitale</i>
thecate hydroids	<i>Aglaophenia latirostris</i>
jellyfish	<i>Aglaura hemistoma</i>
siphonophore	<i>Amphicaryon ernesti</i>
mushroom coral	<i>Anthomastus ritteri</i>
anemone	<i>Anthopleura artemisia</i>
sea pen	<i>Anthoptilum grandiflorum</i>
moon jelly	<i>Aurelia aurita</i>
orange cup coral	<i>Balanophyllia elegans</i>
cup coral	<i>Caryophyllia alaskensis</i>
cup coral	<i>Caryophyllia arnoldi</i>
siphonophore	<i>Chelophyes appendiculata</i>
Purple-striped jelly	<i>Chrysaora colorata</i>
Pacific sea nettle	<i>Chrysaora fuscescens</i>

Appendix V: Species List
CBNMS Draft Management Plan

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
Northern Sea nettle	<i>Chrysaora melanaster</i>
siphonophore	<i>Chuniphyes multidentata</i>
thecate hydroids	<i>Clytia gregaria</i>
silky medusa	<i>Colobonema sericeum</i>
strawberry anemone	<i>Corynactis californica</i>
lion's mane	<i>Cyanea capillata</i>
cup coral	<i>Desmophyllum dianthus</i>
siphonophore	<i>Diphyes bojani</i>
siphonophore	<i>Diphyes dispar</i>
siphonophore	<i>Dromalia alexandri</i>
thecate hydroids	<i>Earleria cellularia</i>
orange zoanthid	<i>Epizoanthus scotinus</i>
siphonophore	<i>Eudoxoides mitra</i>
thecate hydroids	<i>Eutonina indicans</i>
orange hydroid	<i>Garveia annulata</i>
sea pen	<i>Halipteris californica</i>
cup coral	<i>Javania californica</i>
cup coral	<i>Labyrinthocyathus quaylei</i>
tentacle shedding anemone	<i>Liponema brevicornis</i>
jellyfish	<i>Liriope tetraphylla</i>
white plumed anemone	<i>Metridium farcimen</i>
clonal plumose anemone	<i>Metridium senile</i>
siphonophore	<i>Muggiaea atlantica</i>
siphonophore	<i>Nanomia bijuga</i>
coral	<i>Oculina profunda</i>
anemone	<i>Paractinostola faeculenta</i>
cup coral	<i>Paracyathus stearnsii</i>
primnoid coral	<i>Parastenella</i>
purple-striped jelly	<i>Pelagia colorata</i>
Crown jellyfish	<i>Periphylla periphylla</i>
primnoid coral	<i>Plumarella longispina</i>
sea pen	<i>Ptilosarcus gurneyi</i>
siphonophore	<i>Sphaeronectes gracilis</i>
lace coral	<i>Stylantheca porphyra</i>
California hydrocoral	<i>Stylaster californicus</i>
lace coral	<i>Stylaster venustus</i>
sea pen	<i>Stylatula gracilis</i>
siphonophore	<i>Sulculeolaria biloba</i>
red gorgonian coral	<i>Swiftia kofoidi</i>
jellyfish	<i>Tetraplatia volitans</i>
anemone	<i>Urticina lofotensis</i>
fish-eating anemone	<i>Urticina piscivora</i>

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
by-the-wind sailor	<i>Velella velella</i>
siphonophore	<i>Vogtia pentacantha</i>
	Annelida
polychaete worm	<i>Arctonoe fragilis</i>
polychaete worm	<i>Arctonoe vittata</i>
polychaete worm	<i>Bispira volutacornis</i>
polychaete worm	<i>Eudistylia polymorpha</i>
polychaete worm	<i>Eulalia bilineata</i>
polychaete worm	<i>Eunice multipectinata</i>
polychaete worm	<i>Eunice vittata</i>
polychaete worm	<i>Eunoe barbata</i>
polychaete worm	<i>Eunoe senta</i>
polychaete worm	<i>Euphrosine arctia</i>
polychaete worm	<i>Euphrosine dumosa</i>
polychaete worm	<i>Ficopomatus enigmaticus</i>
polychaete worm	<i>Genetyllis castanea</i>
polychaete worm	<i>Glycera tessellata</i>
polychaete worm	<i>Halosydna brevisetosa</i>
polychaete worm	<i>Harmothoe extenuata</i>
polychaete worm	<i>Harmothoe fragilis</i>
polychaete worm	<i>Harmothoe hirsuta</i>
polychaete worm	<i>Lepidasthenia longicirrata</i>
polychaete worm	<i>Lepidonotus caelorus</i>
polychaete worm	<i>Lepidonotus spiculus</i>
polychaete worm	<i>Lepidonotus squamatus</i>
polychaete worm	<i>Lumbrineris inflata</i>
polychaete worm	<i>Lumbrineris japonica</i>
polychaete worm	<i>Lumbrineris latreilli</i>
polychaete worm	<i>Nereiphylla castanea</i>
polychaete worm	<i>Nereis eakini</i>
polychaete worm	<i>Nereis pelagica</i>
polychaete worm	<i>Pholoides asperus</i>
polychaete worm	<i>Phyllochaetopterus prolifica</i>
polychaete worm	<i>Platynereis magalhaensis</i>
polychaete worm	<i>Polydora alloporis</i>
polychaete worm	<i>Rhynchonerella angelini</i>
polychaete worm	<i>Serpula columbiana</i>
polychaete worm	<i>Serpula vermicularis</i>
polychaete worm	<i>Sige bifoliata</i>
polychaete worm	<i>Syllis armillaris</i>
polychaete worm	<i>Tomopteris cavalli</i>
polychaete worm	<i>Tomopteris pacifica</i>

Appendix V: Species List
CBNMS Draft Management Plan

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
polychaete worm	<i>Tomopteris septentrionalis</i>
polychaete worm	<i>Trypanosyllis aeolis</i>
polychaete worm	<i>Trypanosyllis intermedia</i>
polychaete worm	<i>Vanadis longissima</i>
	Mollusca
squid	<i>Abraliopsis felis</i>
divaricate nutclam	<i>Acila castrensis</i>
corded white limpet	<i>Acmaea funiculata</i>
whitecap limpet	<i>Acmaea mitra</i>
harp baby-bubble	<i>Acteocina harpa</i>
gastropod	<i>Alvania almo</i>
gastropod	<i>Alvania compacta</i>
gastropod	<i>Alvania dinora</i>
Santa Rosa alvania	<i>Alvania purpurea</i>
gastropod	<i>Alvania rosana</i>
two-tone amphissa	<i>Amphissa bicolor</i>
wrinkled amphissa	<i>Amphissa columbiana</i>
variegate amphissa	<i>Amphissa versicolor</i>
lyre scissurelle	<i>Anatoma lyra</i>
Pacific sea-lemon	<i>Anisodoris nobilis</i>
Peruvian jingle	<i>Anomia peruviana</i>
	<i>Argopecten irradians concentricus</i>
bivalve	
nudibranch	<i>Armina cordellensis</i>
acute barleynail	<i>Barleeia acuta</i>
gastropod	<i>Bathybembix bairdii</i>
magister armhook squid	<i>Berryteuthis magister</i>
gastropod	<i>Bittium alternatum</i>
ribbed trophon	<i>Boreotrophon multicostatus</i>
turban whelk	<i>Buccinum viridum</i>
modest cadlina	<i>Cadlina modesta</i>
California caecum	<i>Caecum californicum</i>
many-named caecum	<i>Caecum crebricinctum</i>
western caecum	<i>Caecum occidentale</i>
purple-ring topsnail	<i>Calliostoma annulatum</i>
channeled topsnail	<i>Calliostoma canaliculatum</i>
blue topsnail	<i>Calliostoma ligatum</i>
granulose topsnail	<i>Calliostoma supragranosum</i>
chiton	<i>Callistochiton palmulatus</i>
gastropod	<i>Cancellaria cooperii</i>
gastropod	<i>Carinaria japonica</i>
three-tooth cavoline	<i>Cavolinia tridentata</i>
foliate thornmouth	<i>Ceratostoma foliatum</i>

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
secret jewelbox	<i>Chama arcana</i>
California venus	<i>Chione californiensis</i>
squid	<i>Chiroteuthis calyx</i>
squid	<i>Chiroteuthis veranyi</i>
spiny scallop	<i>Chlamys hastata</i>
reddish scallop	<i>Chlamys rubida</i>
gastropod	<i>Clathromangelia interfossa</i>
pyramid clio	<i>Clio pyramidata</i>
sea angle	<i>Clione limacina</i>
yellow limpet	<i>Collisella ochracea</i>
oblique whelk	<i>Colus aphelus</i>
gastropod	<i>Colus trophius</i>
Atlantic corolla	<i>Corolla calceola</i>
spectacular corolla	<i>Corolla spectabilis</i>
hood puncturella	<i>Cranopsis cucullata</i>
giant rock-scallop	<i>Crassadoma gigantea</i>
cross-sculpture crenella	<i>Crenella decussata</i>
pacific half-slippersnail	<i>Crepidatella lingulata</i>
bumpy cyclocardia	<i>Cyclocardia bailyi</i>
stout cyclocardia	<i>Cyclocardia ventricosa</i>
Santa Barbara glass-scallop	<i>Cyclopecten barbarensis</i>
gastropod	<i>Cymakra aspera</i>
gastropod	<i>Cymakra gracilior</i>
bivalve	<i>Delectopecten tillamookensis</i>
Vancouver scallop	<i>Delectopecten vancouverensis</i>
gastropod	<i>Desmopterus papilio</i>
California paperbubble	<i>Diaphana californica</i>
ringed doris	<i>Diaulula sandiegensis</i>
neat-rib keyhole limpet	<i>Diodora arnoldi</i>
rough keyhole limpet	<i>Diodora aspera</i>
orb diplodon	<i>Diplodonta orbella</i>
gastropod	<i>Dolichupis ritteri</i>
Humbolt squid	<i>Dosidicus gigas</i>
gastropod	<i>Epitonium indianorum</i>
gastropod	<i>Epitonium tinctum</i>
appleseed erato	<i>Erato vitellina</i>
gastropod	<i>Euspira lewisii</i>
Spanish shawl	<i>Flabellina iodinea</i>
painted spindle	<i>Fusinus luteopictus</i>
Oregon triton	<i>Fusitriton oregonensis</i>
squid	<i>Galiteuthis phyllura</i>
California sunsetclam	<i>Gari californica</i>

Appendix V: Species List
CBNMS Draft Management Plan

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
gritty doris	<i>Geitodoris heathi</i>
triangular marginella	<i>Gibberula subtrigona</i>
Ford venus	<i>Globivenus fordii</i>
california bittersweet	<i>Glycymeris subobsoleta</i>
gastropod	<i>Glyphostoma canfieldi</i>
squid	<i>Gonatopsis borealis</i>
clawed armhook squid	<i>Gonatus onyx</i>
pear marginella	<i>Granulina margaritula</i>
Chenu mussel	<i>Gregariella chenui</i>
pinto abalone	<i>Haliotis kamtschatkana</i>
chiton	<i>Hanleyella oldroydi</i>
hermissenda	<i>Hermisenda crassicornis</i>
pigeon erato	<i>Hespererato columbella</i>
Arctic hiatella	<i>Hiatella arctica</i>
squid	<i>Histioteuthis hoylei</i>
berry dwarf-turban	<i>Homalopoma baculum</i>
gastropod	<i>Homalopoma berryi</i>
gastropod	<i>Homalopoma lacunatum</i>
dark dwarf-turban	<i>Homalopoma luridum</i>
gastropod	<i>Homalopoma mimicum</i>
few-rib dwarf-turban	<i>Homalopoma paucicostatum</i>
rayed dwarf-turban	<i>Homalopoma radiatum</i>
Kennerley venus	<i>Humilaria kennerleyi</i>
gastropod	<i>Iothia lindbergi</i>
lamellar venus	<i>Irusella lamellifera</i>
suborbicular kellyclam	<i>Kellia suborbicularis</i>
gastropod	<i>Kurtziella beta</i>
San Diego lamellaria	<i>Lamellaria diegoensis</i>
San Diego scallop	<i>Leopecten diegensis</i>
chiton	<i>Lepidochitona flectens</i>
chiton	<i>Lepidozona radians</i>
chiton	<i>Lepidozona retiporosa</i>
chiton	<i>Lepidozona scabricostata</i>
chiton	<i>Lepidozona willetti</i>
chiton	<i>Leptochiton alveolus</i>
chiton	<i>Leptochiton belknapi</i>
chiton	<i>Leptochiton rugatus</i>
helcid pteropod	<i>Limacina helicina</i>
Hemphill fileclam	<i>Limaria hemphilli</i>
sharp-rib lirularia	<i>Lirularia acuticostata</i>
few-spot lirularia	<i>Lirularia parcipicta</i>
feather datemussel	<i>Lithophaga plumula</i>
california market squid	<i>Loligo opalescens</i>
bivalve	<i>Lucinoma annulata</i>

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
Farallon cyclostreme	<i>Macrarene farallonensis</i>
california macromphaline	<i>Macromphalina californica</i>
pacific rosy margarite	<i>Margarites rhodia</i>
salmon margarite	<i>Margarites salmoneus</i>
gastropod	<i>Megatebennus bimaculatus</i>
auburn eulima	<i>Melanella rutila</i>
gastropod	<i>Melanella thersites</i>
gastropod	<i>Metaxia convexa</i>
short baby-bubble	<i>Microglyphis brevicula</i>
tiny pouchclam	<i>Milneria minima</i>
elongate carditid	<i>Miodontiscus prolongatus</i>
half-pitted miter	<i>Mitra idae</i>
variegate dovesnail	<i>Mitrella tuberosa</i>
gastropod	<i>Mitromorpha gracilior</i>
fat horsemussel	<i>Modiolus capax</i>
California horsemussel	<i>Modiolus carpenteri</i>
bag horsemussel	<i>Modiolus sacculifer</i>
nudibranch	<i>Montereina nobilis</i>
chiton	<i>Mopalia egretta</i>
chiton	<i>Mopalia imporcata</i>
robust clubhook squid	<i>Moroteuthis robusta</i>
California mussel	<i>Mytilus zonarius</i>
smooth western nassa	<i>Nassarius insculptus</i>
gastropod	<i>Nassarius mendicus</i>
hundred-line cockle	<i>Nemocardium centifilosum</i>
gastropod	<i>Neptunea amianta</i>
purple rocksnail	<i>Ocinebrina atropurpurea</i>
gastropod	<i>Ocinebrina interfossa</i>
lurid rocksnail	<i>Ocinebrina lurida</i>
squid	<i>Octopoteuthis deletron</i>
North Pacific bigeye octopus	<i>Octopus californicus</i>
North Pacific giant octopus	<i>Octopus dofleini</i>
smoothskin octopus	<i>Octopus leioderma</i>
East Pacific red octopus	<i>Octopus rubescens</i>
beatic dwarf olive	<i>Olivella baetica</i>
red flying squid	<i>Ommastrephes bartramii</i>
boreal clubhook squid	<i>Onychoteuthis borealijaponicus</i>
octopus	<i>Opisthoteuthis californiana</i>
sharp-rib cyclostreme	<i>Parviturbo acuticostatus</i>
California pedicularia	<i>Pedicularia californica</i>

Appendix V: Species List
CBNMS Draft Management Plan

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
Monterey wormsnail	<i>Petalochonchus montereyensis</i>
California petricolid	<i>Petricola californiensis</i>
chiton	<i>Placiphorella atlantica</i>
gastropod	<i>Pleurobranchaea californica</i>
alaska jingle	<i>Pododesmus macrochisma</i>
red turban	<i>Pomaulax gibberosus</i>
Pacific jewelbox	<i>Pseudochama exogyra</i>
deep jewelbox	<i>Pseudochama granti</i>
frill-wing murex	<i>Pteropurpura macroptera</i>
hood puncturella	<i>Puncturella cucullata</i>
dot-rib puncturella	<i>Puncturella punctocostata</i>
gastropod	<i>Rictaxis punctocaelatus</i>
gastropod	<i>Rissoina hannai</i>
gastropod	<i>Rissoina newcombei</i>
North Pacific bobtail squid	<i>Rossia pacifica</i>
elegant emarginula	<i>Scelidotoma bella</i>
gastropod	<i>Seila montereyensis</i>
rose-painted semele	<i>Semele rubropicta</i>
sharp-rib semele	<i>Semele venusta</i>
scaled wormsnail	<i>Serpulorbis squamiger</i>
rim scissurelle	<i>Sinezona rimuloides</i>
lovely pacific solarelle	<i>Solariella peramabilis</i>
black tegula	<i>Tegula funebris</i>
lined chiton	<i>Tonicella lineata</i>
fat gaper	<i>Tresus capax</i>
San Pedro triphora	<i>Triphora pedroana</i>
rosy tritonia	<i>Tritonia diomedea</i>
california trivia	<i>Trivia californiana</i>
gastropod	<i>Trivia ritteri</i>
gastropod	<i>Trophonopsis stuarti</i>
vampire squid	<i>Vampyroteuthis infernalis</i>
granular lamellaria	<i>Velutina granulata</i>
smooth lamellaria	<i>Velutina velutina</i>
shield false limpet	<i>Williamia peltoides</i>
	Arthropoda
spiny lithode crab	<i>Acantholithodes hispidus</i>
copepod	<i>Acartia danae</i>
copepod	<i>Acartia hudsonica</i>
copepod	<i>Acartia longiremis</i>
copepod	<i>Acartia tonsa</i>
copepod	<i>Aetideus bradyi</i>
copepod	<i>Aetideus divergens</i>

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
Mysid shrimp	<i>Alienacanthomysis macropsis</i>
twistclaw pistol shrimp	<i>Alpheus clamator</i>
copepod	<i>Arietellus plumifer</i>
copepod	<i>Arietellus setosus</i>
barnacles	<i>Armatobalanus nefrens</i>
copepod	<i>Augaptilus glacialis</i>
barnacles	<i>Balanus nubilus</i>
Burkenroad blunt-tail shrimp	<i>Bentheogennema burkenroadi</i>
spiny mole crab	<i>Blepharipoda occidentalis</i>
amphipod	<i>Brachyscelus crusculum</i>
copepod	<i>Bradyidius similis</i>
copepod	<i>Calanus marshallae</i>
copepod	<i>Calanus pacificus</i>
copepod	<i>Caligus clemensi</i>
copepod	<i>Caligus macarovi</i>
copepod	<i>Calocalanus pavo</i>
copepod	<i>Calocalanus pavoninus</i>
copepod	<i>Calocalanus styliremis</i>
Pacific rock crab	<i>Cancer antennarius</i>
Dungeness crab	<i>Cancer magister</i>
pygmy rock crab	<i>Cancer oregonensis</i>
red rock crab	<i>Cancer productus</i>
copepod	<i>Candacia bipinnata</i>
copepod	<i>Candacia columbiae</i>
green crab	<i>Carcinus maenas</i>
copepod	<i>Centropages abdominalis</i>
copepod	<i>Centropages bradyi</i>
grooved Tanner crab	<i>Chionoecetes tanneri</i>
longhorn decorator crab	<i>Chorilia longipes</i>
copepod	<i>Clausocalanus arcuicornis</i>
copepod	<i>Clausocalanus furcatus</i>
copepod	<i>Clausocalanus lividus</i>
copepod	<i>Clausocalanus parapergens</i>
ostracod	<i>Conchoecetta acuminata</i>
ostracod	<i>Conchoecia macrocheira</i>
ostracod	<i>Conchoecia magna</i>
ostracod	<i>Conchoecilla daphnoides</i>
copepod	<i>Corycaeus anglicus</i>
copepod	<i>Corycaeus flaccus</i>
bay shrimp	<i>Crangon nigromaculata</i>
copepod	<i>Ctenocalanus vanus</i>
ostracod	<i>Discoconchoecia elegans</i>

Appendix V: Species List
CBNMS Draft Management Plan

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
amphipod	<i>Elasmopus antennatus</i>
Pacific sand crab	<i>Emerita analoga</i>
copepod	<i>Epilabidocera amphitrites</i>
striped eualid	<i>Eualus lineatus</i>
copepod	<i>Eucalanus bungii</i>
copepod	<i>Eucalanus californicus</i>
copepod	<i>Eucalanus hyalinus</i>
copepod	<i>Euchaeta elongata</i>
copepod	<i>Euchaeta media</i>
copepod	<i>Euchirella curticauda</i>
copepod	<i>Euchirella grandicornis</i>
copepod	<i>Euchirella pseudopulchra</i>
copepod	<i>Euchirella rostrata</i>
krill	<i>Euphausia pacifica</i>
krill	<i>Euphausia recurva</i>
grooved mussel crab	<i>Fabia subquadrata</i>
copepod	<i>Gaetanus minor</i>
copepod	<i>Gaetanus pungenis</i>
copepod	<i>Haloptilus longicornis</i>
furry crab	<i>Hapalogaster cavicauda</i>
purple shore crab	<i>Hemigrapsus nudus</i>
barred shrimp	<i>Heptacarpus pugettensis</i>
slender coastal shrimp	<i>Heptacarpus tenuissimus</i>
copepod	<i>Heterorhabdus papilliger</i>
copepod	<i>Heterorhabdus tanneri</i>
copepod	<i>Heterostylites longicornis</i>
Mysid shrimp	<i>Holmesiella anomala</i>
amphipod	<i>Hyperia medusarum</i>
amphipod	<i>Hyperoche mediterranea</i>
amphipod	<i>Hyperoche medusarum</i>
Mysid shrimp	<i>Inusitatomysis insolita</i>
isopod	<i>Janiralata occidentalis</i>
isopod	<i>Joeropsis dubia</i>
isopod	<i>Joeropsis dubia dubia</i>
tanaid	<i>Leptochelia savignyi</i>
amphipod	<i>Leucothoe spinicarpa</i>
scarlet king crab	<i>Lithodes couesi</i>
brown box crab	<i>Lopholithodes foraminatus</i>
blackclaw crestleg crab	<i>Lophopanopeus bellus</i>
copepod	<i>Lophothrix frontalis</i>
moss crab	<i>Loxorhynchus crispatus</i>
sheep crab	<i>Loxorhynchus grandis</i>
copepod	<i>Lucicutia flavicornis</i>
copepod	<i>Lucicutia longicornis</i>

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
amphipod	<i>Lycaea pulex</i>
copepod	<i>Mecynocera tenuis</i>
barnacle	<i>Megabalanus californicus</i>
copepod	<i>Mesocalanus tenuicornis</i>
copepod	<i>Metridia pacifica</i>
ostracod	<i>Mikroconchoecia acuticosta</i>
squat lobster	<i>Munida quadrispina</i>
isopod	<i>Munna spinifrons</i>
isopod	<i>Munna stephensi</i>
krill	<i>Nematobrachion flexipes</i>
krill	<i>Nematoscelis difficilis</i>
copepod	<i>Neocalanus cristatus</i>
copepod	<i>Neocalanus plumchrus</i>
krill	<i>Nyctiphanes simplex</i>
copepod	<i>Oithona atlantica</i>
copepod	<i>Oithona similis</i>
amphipod	<i>Opisa tridentata</i>
graceful decorator crab	<i>Oregonia gracilis</i>
ostracod	<i>Orthoconchoecia striola</i>
amphipod	<i>Oxycephalus clausi</i>
left handed hermit crab	<i>Paguristes ulreyi</i>
knobbyhand hermit	<i>Pagurus confragosus</i>
sidestriped shrimp	<i>Pandalopsis dispar</i>
dock shrimp	<i>Pandalus danae</i>
humpy shrimp	<i>Pandalus goniurus</i>
coonstriped shrimp	<i>Pandalus hypsinotus</i>
ocean shrimp	<i>Pandalus jordani</i>
spot shrimp	<i>Pandalus platyceros</i>
roughpatch shrimp	<i>Pandalus stenolepis</i>
yellowleg pandalid	<i>Pandalus tridens</i>
copepod	<i>Paracalanus indicus</i>
copepod	<i>Paracalanus parvus</i>
California king crab	<i>Paralithodes californiensis</i>
Spiny king crab	<i>Paralithodes rathbuni</i>
amphipod	<i>Paraphronima crassipes</i>
amphipod	<i>Paraphronima gracilis</i>
copepod	<i>Pareucalanus parki</i>
Pacific glass shrimp	<i>Pasiphaea pacifica</i>
crimson pasiphaeid	<i>Pasiphaea tarda</i>
amphipod	<i>Phronima sedentaria</i>
amphipod	<i>Phronimopsis spinifera</i>
armed box crab	<i>Platymera gaudichaudii</i>
copepod	<i>Pleuromamma borealis</i>

Appendix V: Species List
CBNMS Draft Management Plan

Invertebrates	
COMMON NAME	SCIENTIFIC NAME
copepod	<i>Pleuromamma quadrangulata</i>
copepod	<i>Pleuromamma robusta</i>
copepod	<i>Pleuromamma scutellata</i>
copepod	<i>Pleuromamma xiphias</i>
pelagic red crab	<i>Pleuroncodes planipes</i>
amphipod	<i>Primno abyssalis</i>
amphipod	<i>Primno brevidens</i>
copepod	<i>Pseudocalanus mimus</i>
copepod	<i>Pseudocalanus minutus</i>
copepod	<i>Pseudocalanus moultoni</i>
graceful kelp crab	<i>Pugettia gracilis</i>
cryptic kelp crab	<i>Pugettia richii</i>
copepod	<i>Racovitzanus antarcticus</i>
copepod	<i>Rhincalanus nasutus</i>
copepod	<i>Sapphirina nigromaculata</i>
amphipod	<i>Scina nana</i>
copepod	<i>Scolecithricella minor</i>
copepod	<i>Scolecithricella ovata</i>
copepod	<i>Scolecithrix bradyi</i>
copepod	<i>Scolecithrix danae</i>
copepod	<i>Scottocalanus persecans</i>
sharpnose crab	<i>Scyra acutifrons</i>
prawn	<i>Sergestes similis</i>
barnacle	<i>Solidobalanus engbergi</i>
offshore blade shrimp	<i>Spirontocaris sica</i>
amphipod	<i>Streetsia challengerii</i>
Grady's cave amphipod	<i>Stygobromus gradyi</i>
krill	<i>Stylocheiron abbreviatum</i>
krill	<i>Stylocheiron longicorne</i>
littoral pistol shrimp	<i>Synalpheus lockingtoni</i>
krill	<i>Tessarabrachion oculatum</i>
amphipod	<i>Themisto pacifica</i>
krill	<i>Thysanoessa gregaria</i>
krill	<i>Thysanoessa inspinata</i>
krill	<i>Thysanoessa spinifera</i>
copepod	<i>Tortanus discaudatus</i>
copepod	<i>Triconia conifera</i>
amphipod	<i>Tryphana malmei</i>
copepod	<i>Undeuchaeta intermedia</i>
copepod	<i>Undeuchaeta plumosa</i>
isopod	<i>Uromunna ubiquita</i>
amphipod	<i>Vibilia armata</i>
Amphipod	<i>Vibilia australis</i>
Amphipod	<i>Vibilia stebbingi</i>

ALGAE

The algae species list was compiled from collections from Cordell Expedition SCUBA divers. None of the species are listed as threatened or endangered under the Endangered Species Act.

Algae
<i>SCIENTIFIC NAME</i>
<u>Chlorophyta</u>
<i>Derbesia marina</i>
<i>Ostreobium quekettii</i>
<i>Ulvella viridis</i>
<u>Rhodophyta</u>
<i>Acrochaetium sp.</i>
<i>Antithamnion defectum</i>
<i>Antithamnion kyllini</i>
<i>Antithamnionella spirographidis</i>
<i>Asterocolax gardneri</i>
<i>Botryocladia sp.</i>
<i>Callithamnion biseriatum</i>
<i>Callophyllis heanophylla</i>
<i>Callophyllis rhynchocarpa</i>
<i>Corallinaceae sp.</i>
<i>Delesseriaceae sp.</i>
<i>Erythrocladia irregularis</i>
<i>Fosliella sp.</i>
<i>Leptofaucea pacifica</i>
<i>Maripelta rotata</i>
<i>Meiodiscus conrescens</i>
<i>Membranoptera platyphylla</i>
<i>Minium parvum</i>
<i>Opuntiella californica</i>
<i>Platysiphonia decumbens</i>
<i>Pleonosporium squarulosum</i>
<i>Polyneura latissima</i>
<i>Porphyropsis coccinea</i>
<i>Pterothamnion heteromorphum</i>
<i>Pugetia fragilissima</i>
<i>Rhodymenia hancockii</i>
<i>Rhodymeniales sp.</i>
<i>Rubrointrusa membranacea</i>
<i>Weeksia sp.</i>

National Marine Sanctuaries



Agenda Item C.2.b

Supplemental NMS PowerPoint

June 2014

Pacific Fisheries Management Council Presentation for CBNMS and GFNMS Proposed Boundary Expansion (DEIS, Proposed Rule, Management Plans)

**Cordell Bank and Gulf of the Farallones
National Marine Sanctuaries**

June 24, 2014

Process for Proposed Boundary Expansion



1. Scoping

Published Notice of Intent; solicited comments to determine the scope of issues



2. Develop DEIS; draft related documents

Considered scoping comments; conducted impact analysis; developed Draft Environmental Impact Statement (DEIS), revised site mgt. plans, proposed regulations, and revised terms of designation.



3. Reviews & Public Comment

DEIS and draft revised mgt. plans, draft proposed regulations, and draft revised terms of designation released; conduct agency consultations; Congress and Governor review; and public comment.



4. Publish FEIS, Final Docs.; Decision Effective

Respond to comments, finalize documents based on public comment. Publish Final EIS, mgt. plans, and final rule. Congress and Governor review. Publish Record of Decision.

Dec. 1, 2012 - March 1, 2013

Spring 2013 – Winter 2014

April 14 - June 30, 2014

Summer/Fall 2014 – Winter 2014/15

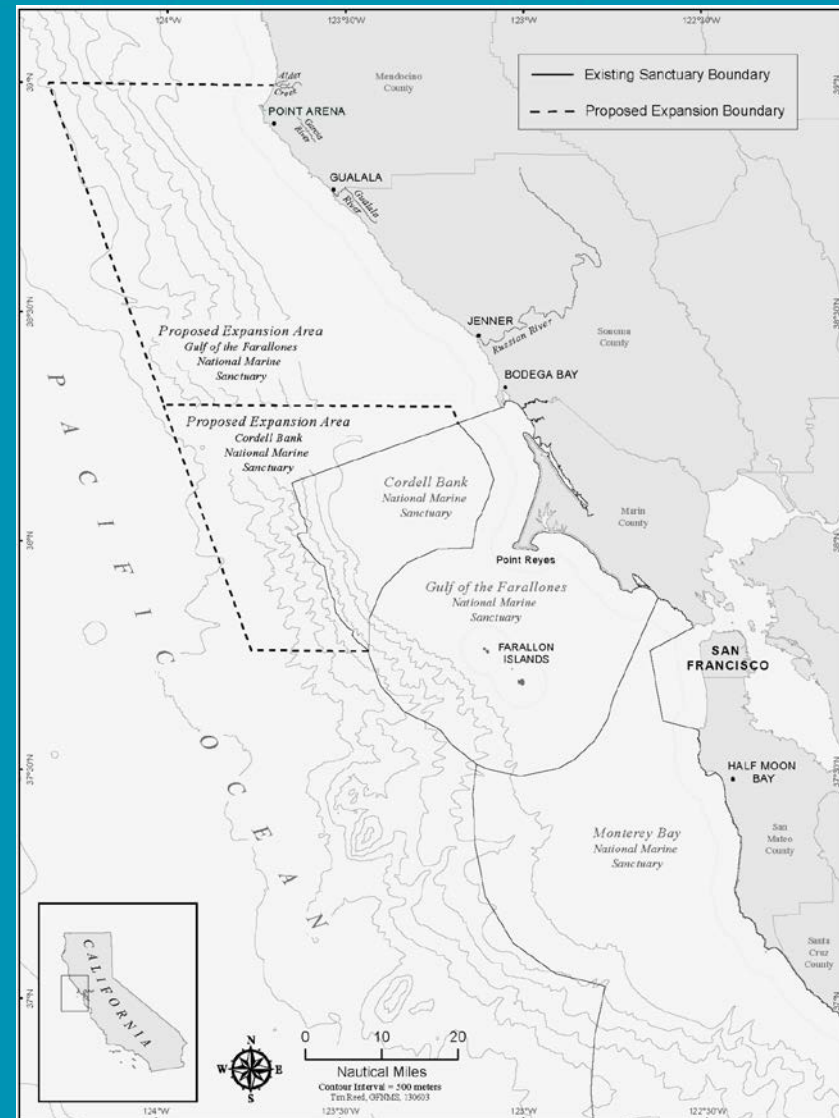
Proposal for CBNMS & GFNMS Expansion



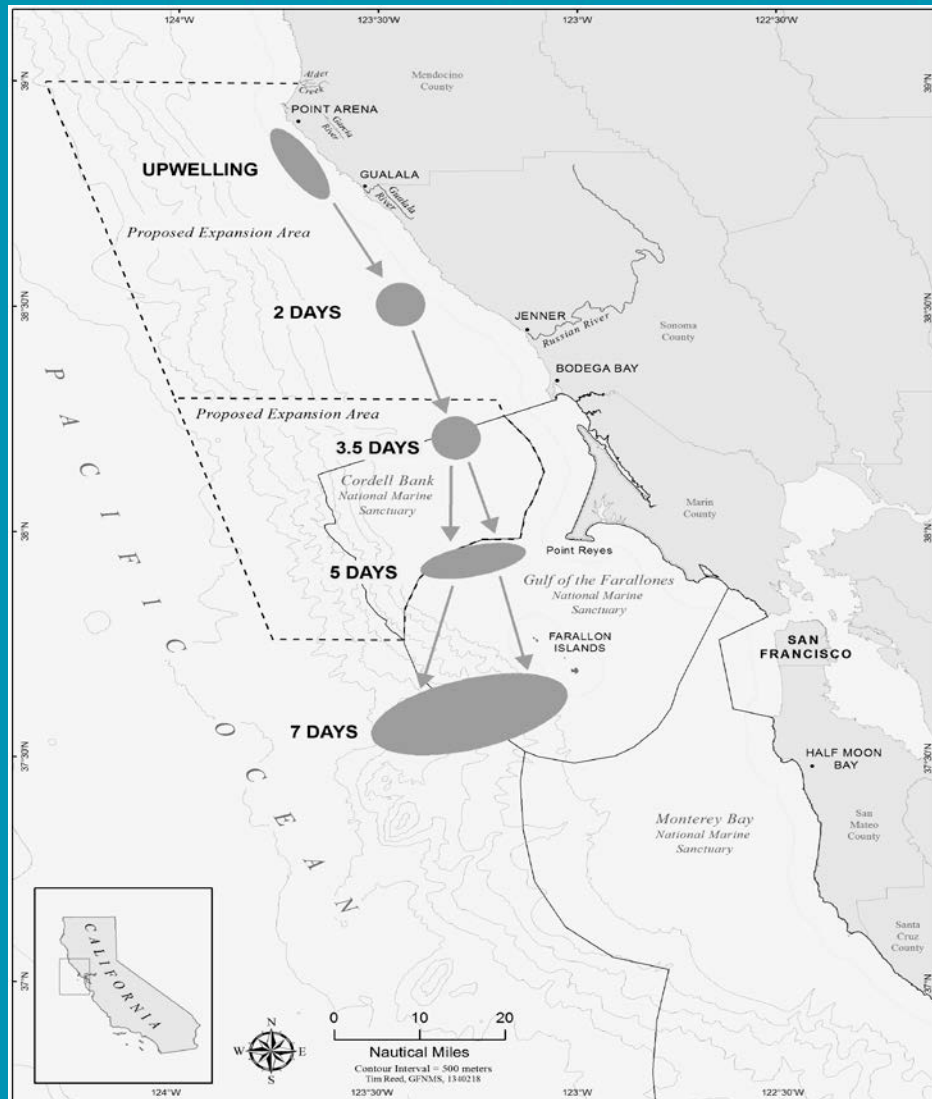
In response to public interest, NOAA is proposing to expand CBNMS and GFNMS.

NOAA is seeking public comment on 4 documents:

- Draft Environmental Impact Statement (DEIS)
- Notice of Proposed Rule Making (Proposed Rule)
- Revised Management Plans for CBNMS and GFNMS



Purpose



Expansion of sanctuaries waters and submerged lands to the area north & west to increase protection of the environment, completing protection of the globally significant coastal upwelling cell originating off Point Arena and flowing via wind driven currents into the sanctuaries.

Need



Sanctuary expansion would provide coordinated protection and programs for this area while facilitating uses compatible with resource protection. Existing laws and policies for the Point Arena upwelling area and south do not provide comprehensive and coordinated conservation and management to protect the rich and abundant natural resources of this area.



Alternatives



- *No action:* status quo maintained.
- *Proposed Action*
- *Application of existing sanctuary regulations* to expanded sanctuary areas for CBNMS and GFNMS.
- *Arena Cove boundary alternative:* the existing pier and waters east (shoreward) of the pier would be inside the GFNMS boundary. This alternative could be implemented with the Proposed Action or the application of existing sanctuary regulations alternative.
- *Alternative MPWC zones:* MPWC Zones 2a or 2b and 4 would be different sizes and shapes than Proposed Action MPWC Zones 2 and 4. This alternative could be implemented with the Proposed Action or the Arena Cove boundary alternative.

Proposed Action: Boundaries

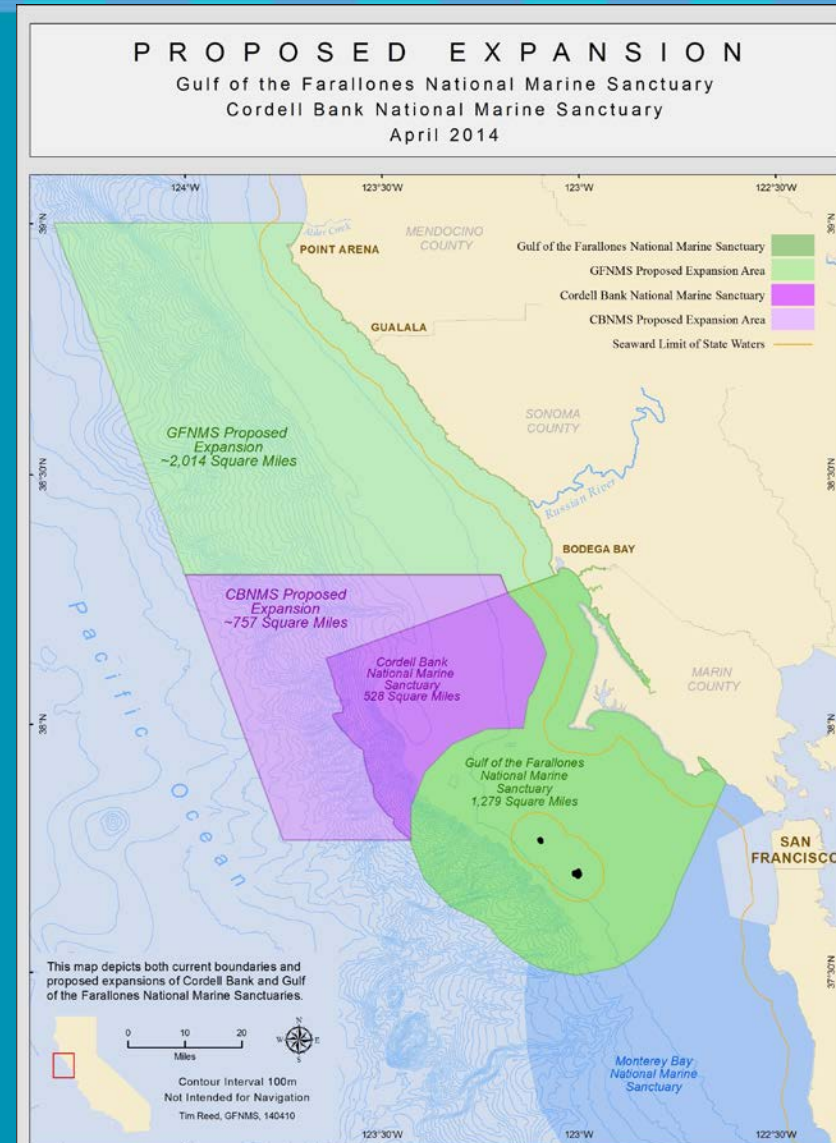


GFNMS

- Bodega Bay to Manchester Beach
- State and federal waters
- West to approximately the 10,000-foot depth contour
- Total area 3,297 sq. miles

CBNMS

- Federal waters
- West to approximately the 10,000-foot depth contour
- Slightly north to protect important subsea features such as Bodega Canyon
- Total area 1,286 sq. miles



Proposed Action: Regulations



- **Carry over existing CBNMS and GFNMS regulations into the expansion area**
 - prohibit oil and gas exploration and development
 - prohibit seabed disturbance
 - prohibit untreated sewage discharge



Proposed Action: Regulations



- **Amend current regulations for CBNMS and GFNMS and apply to existing and proposed boundaries**
 - add exception to allow for discharge of clean gray water to help fishermen and recreational boaters given large area
 - add exception to allow MPWC use in four restricted zones. MPWC are currently allowed throughout expansion area, including state marine protected areas.
 - remove the exception for the construction of pipelines for hydrocarbon operations

Proposed Action: Regulations



Add New Regulations

- Wildlife Protection Zones to protect wildlife hotspots from disturbance (overflight, cargo vessel and white shark).
- Authorization to approve other agencies permits. If projects do not meet sanctuaries terms and conditions they are rejected. Examples of projects authorized by Monterey Bay National Marine Sanctuary:
 - Mavericks Surf Contest (USCG Marine Events Permit)
 - CalTrans rip rap placement along Hwy 1 (CCC Emergency Permit)
 - Scripps Institute / ATOC Cable (CCC Federal Consistency Determination)

No Fishing Regulations



- The current sanctuary regulations and proposed regulations for the expanded area do not include any regulations to manage recreational or commercial fishing.
- Fishing within the existing and proposed boundaries of GFNMS and CBNMS will continue to be managed by California Department of Fish and Wildlife, and NOAA Fisheries with advice from the Pacific Fishery Management Council.
- Some of the state's most productive commercial and recreational fisheries for salmon and crab occur in national marine sanctuaries

Revised CBNMS and GFNMS Management Plan: Changes to Action Plans



Summary of edits and changes to all action plans:

- Updated all jurisdictional settings to cover proposed expansion areas.
- Updated strategies, activities and performance measures where appropriate to reflect proposed boundary expansion.
- Deleted activities that have been completed since the 2008 management plan.
- Added new strategies for activities and programs that have emerged since the 2008 management plan.

All goals and objectives for each action plan have remained the same. New strategies were only added if they met the goals and objectives of the action plan.



Public Comment Period



Public Comment Period Open Until June 30, 2014

How to comment:

- At one of 4 public comment meetings
- U.S. Mail:
Maria Brown, Sanctuary Superintendent
Gulf of the Farallones National Marine Sanctuary
991 Marine Drive, The Presidio
San Francisco, CA 94129
- Through the Federal eRulemaking Portal docket number
NOAA-NOS-2012-0228 at <http://www.regulations.gov>

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON GULF OF THE
FARALLONES AND CORDELL BANK NATIONAL MARINE SANCTUARY BOUNDARY
EXPANSION

The Coastal Pelagic Species Advisory Subpanel (CPSAS) received a presentation from Lisa Wooninck, representing the National Marine Sanctuaries, and reviewed Briefing Book materials, including public comments. The CPSAS would like to draw upon the comments and concerns voiced by the Alliance of Communities for Sustainable Fisheries (ACSF) contained in Agenda Item C.2.d, Public Comment. In particular, we would like to highlight the following points:

[1] *Clarify that the Magnuson-Stevens Act is the dominant statute for any fishing-related management issues, including creation of Marine Protected Areas inside Sanctuaries and National Monuments.*

Although the current expansion proposal does not intend to change its designation document nor manage fisheries, this has been a sensitive issue for many years, which the Council has also noted in its comments.

[2] *Task the National Marine Sanctuary Program (NMSP) and individual sites to use robust, peer-reviewed science in management decisions. The sanctuaries have no equivalent of the Council's Science and Statistical Committee (SSC), nor any requirement to use the best available science in decision-making.*

NMSP work products would benefit by independent peer review, as is required in the Council process.

[3] *The Sanctuary Program should explain why expansions, some quite large, do not violate Congressional intent, in as much as there is a prohibition on new sanctuary designations... until such time as the Sanctuary Program shows that it is meeting its goals within budget.*

It is unclear how the sanctuaries would be able to maintain current programs under existing budgets if these sanctuaries are expanded.

By and large, fisheries have had a good working relationship with both the Gulf of the Farallones and Cordell Bank Marine Sanctuaries, and fishermen appreciate the Sanctuaries' interest in protecting the ecosystem surrounding the northern California coast. However, this expansion appears to be moving away from the original Congressional intent that Sanctuaries balance resource protections with multiple use opportunities.

The CPSAS also expresses concern over the precedent set by using administrative action to create this expansion. We suggest the above issues and others reflected in public comment are resolved before further sanctuary expansion occurs.

ENFORCEMENT CONSULTANTS REPORT ON GULF OF THE FARALLONES AND
CORDELL BANK NATIONAL MARINE SANCTUARY BOUNDARY EXPANSION

The Enforcement Consultants (EC) has reviewed the documents pertaining to Agenda Item C.2, Gulf of the Farallones and Cordell Bank National Marine Sanctuary (NMS) Boundary Expansion, and has the following comments.

Regarding Discharge Regulations (other than from a cruise ship), The EC has serious concerns that the regulation as proposed will impair our ability to conduct continuous underway operations. This will have a direct impact on our ability to effectively enforce fishery regulations, as well as regulations that pertain to the sanctuary. This is primarily due to the costs and complexity of vessel modifications, to increase holding tank capabilities or chemical treatment, as required. California Department of Fish and Wildlife and U.S. Coast Guard are in initial discussion with Sanctuary staff to find a mutually agreed upon solution.

PPMC
06/24/14

GROUND FISH ADVISORY SUBPANEL REPORT ON
GULF OF THE FARALLONES AND CORDELL BANK NATIONAL MARINE SANCTUARY
BOUNDARY EXPANSION

The Groundfish Advisory Subpanel (GAP) heard from Dr. Lisa Wooninck about a proposed action by the Gulf of the Farallones (GFNMS) and Cordell Banks National Marine Sanctuaries (CBNMS), to expand the boundaries of each.

The GAP believes that the relationship of the two mentioned sanctuaries with the fishing industry has been good over time. However, based on problematic interactions with other sanctuaries over the years, the GAP has concerns about the future evolution of the National Marine Sanctuary Program.

The GAP can find no compelling reason for an expansion of any sanctuary on the West Coast. The need for upwelling area protection at Pt. Arena is not clearly defined. Pt. Arena is just one of many upwelling areas along the West Coast. The GAP is unclear which activities would be prohibited within the sanctuaries. There is particular concern with the regulation of maintenance of port infrastructure, especially dredging and disposal of spoils. A sanctuary is not the only tool for ocean protection.

This expansion proposal cannot be supported due to the following unresolved issues:

1. Fishery management authority.

This has been and will remain ambiguous until the MSA and/or NMSA are reauthorized or amended with language clarifying paramount authority over all managed marine species. The scientific expertise for conserving, managing, and regulating fisheries within the EEZ is found within the state and federal fishery management agencies. A sanctuary could have authority over many other entities concerning environmental standards.

2. Sanctuary governance structure.

The GAP believes that the sanctuary governance structure should allow for significant local oversight. The sole management authority exists with a single person, the superintendent. Local communities may only have input at the discretion of the superintendent.

2. Creation of no-fishing zones through sanctuary authority.

This is a fishery management action and should only be allowed through the authority of the relevant federal and/or state fishery management processes.

3. Protection vs. harvest of ocean resources.

Fishery management standards should dictate what level of protection is accorded concerning marine species and habitat currently under current or future fishing management.

4. Existing protections and management.

A thorough analysis is needed to quantify existing protections and management to determine whether there is a need for additional protections. All regulatory protections and authorities need to be part of this analysis.

An additional comment on funding needs to be addressed. Is there sufficient federal funding for this expansion, present and future? The GAP is concerned about the decline in funding for all marine management. Would the funding for this issue potentially result in even less available for fishery management?

HABITAT COMMITTEE REPORT ON GULF OF THE FARALLONES AND CORDELL
BANK NATIONAL MARINE SANCTUARY BOUNDARY EXPANSION

The Habitat Committee (HC) would like to direct the Council's attention to Agenda Item H.1.a, Attachment 4: Draft Letter to Gulf of the Farallones National Marine Sanctuary, which addresses essential fish habitat, existing regulations, additional permitted uses in the Sanctuaries, oil and gas development, alternative offshore energy, fishing regulations, and other issues. This letter was included in the briefing book per the direction of the Council in April.

PFMC
06/24/14

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT
GULF OF FARALLONES AND CORDELL BANKS NATIONAL MARINE
SANCTUARIES BOUNDARY EXPANSION

The Highly Migratory Species Advisory Subpanel (HMSAS) is concerned about the proposed expansion of the Gulf of Farallones and Cordell Bank National Marine Sanctuaries (NMS). While the proposal states that there will be no fishing regulations in the expansion areas, fishing was regulated at the Channel Islands NMS. It was done by using a Marine Protected Area (MPA) to create a no fishing zone inside the sanctuary. According to the Alliance of Communities for Sustainable Fisheries located at Monterey Bay, the fishermen have had a hard time maintaining their fishing rights in the Monterey NMS. Fishing regulatory authority must remain with the Council and state authorities for all fishing regulations in any NMS or NMS expansion. Sanctuary authority must not be allowed to create no fishing zones as a substitute for Pacific Fishery Management Council or state fishing regulations. The HMSAS is also concerned about the list of activities that could affect fishing such as prohibitions on gray water discharges, altering the sea bed, taking and possessing certain species, air water quality issues, use of lead weights, bottom contacting gear, and other fishing activities. Restrictions on vessel sewage holding tanks regardless of size, fish cleaning, introduced species, bait, fishing gear defined as harmful, and fuel, oil, and other contaminants produced by fishing boats are also problematic.

HMSAS sees no sound reason for expansion of these two sanctuaries. The fishermen on the HMSAS know there are upwelling currents along the entire West Coast and do not see justification for special protection in these proposed expansion areas. We are not sure just what is being protected in these areas. Especially disconcerting is a proposed new authorization authority for the NMS to allow several of the prohibited activities inside these sanctuaries such as alternative energy development, desalination, oil and gas exploration, dredging, and disposal. The new NMS authority could allow all of these through the issuance of an exemption permit. This can negate the purpose of a marine sanctuary. As far as HMSAS is concerned, there appears to be no need to add yet another layer of jurisdiction to an already well-protected area off of California's coast line.

PFMC
06/24/14

SALMON ADVISORY SUBPANEL REPORT ON GULF OF THE FARALLONES AND CORDELL BANK NATIONAL MARINE SANCTUARY BOUNDARY EXPANSION

The Salmon Advisory Subpanel (SAS) appreciates the benefits that National Marine Sanctuaries (NMS) can offer to fisheries through the protection of habitat and the exclusion of harmful activities. Commercial and recreational anglers rely on healthy and vibrant ecosystems. Therefore, the SAS believes that the goals of the NMS should be complementary to those of anglers. The SAS does not believe that NMS ought to burden or otherwise interfere with lawful fishing practices that substantially predate the creation of the Sanctuaries and do not pose harm to the ecosystem in any demonstrable way.

To our knowledge, the Cordell Bank and Gulf of the Farallones NMS have not adopted regulations that expressly regulate the take of fish and invertebrates in the waters of the Sanctuaries. However, the SAS notes that the Sanctuaries have expressly regulated fishing *activities*, which is an indirect path to regulating fishing. These regulations, if enforced as plainly written, would severely curtail if not eliminate fishing in the waters of the Sanctuaries.

To date, enforcement discretion and the grace of the Sanctuary Superintendent has allowed fishing activities to continue without interference. However, discretion and grace can be ephemeral. The appropriate solution is to amend the regulations to permit longstanding fishing practices to continue without threat of substantial civil fines and adverse court judgments. Absent such amendments, the SAS strongly objects to the proposed boundary expansion of the Cordell Bank and Gulf of the Farallones NMS.

It is poor public policy to promulgate overbroad and unnecessary regulations that the agency charged with enforcement purportedly intends not to enforce, at least for today.

Example 1: Fishing gear expressly defined as “harmful matter” along with fuel, oil and other contaminants.

Nobody wants to see Sanctuaries treated as a toxic waste dump. Reasonable regulations are needed to protect the ecosystem. Reasonable regulations would also distinguish between a fuel spill, on the one hand, and the incidental loss of fishing gear, on the other hand.

Fishing necessarily involves the placement of line, sinkers, and hooks into the Sanctuary ecosystem with the hope of extracting part of that ecosystem for the dinner plate. In the course of every fishing effort, there is a real risk of the loss of line, sinkers and hooks (or crab gear). Sometimes hooks snag on bottom structure. Other times a strong fish breaks off, retaining the hook and a length of line. Salmon fishing in the Sanctuary, in particular, involves the loss of sinkers. Propellers of passing boats can cut lines attached to crab traps.

Under the present Sanctuary regulations, each deposit of harmful matter, i.e. fishing gear, in the Sanctuary exposes the angler to significant civil penalties and legal costs. Enforcement of the present regulations would comprise a *de facto* fishing ban in Sanctuary waters. This risk of a fishing ban should not be enlarged through an expansion of Sanctuary boundaries.

Example 2: Sanctuary Regulations Require All Vessels, Regardless of Size, to Have Sewage Holding Tanks (Even Kayaks)

Federal and state regulations already restrict the discharge of sewage into coastal waters. The regulations are particularly strict with regard to solid waste. Sanctuary regulations, however, prohibit the discharge of any waste, even liquids. This means that every vessel, even kayaks, must contain wastes with holding tanks. This is hardly practical nor is there any demonstration of genuine harm to the Sanctuary ecosystem.

Example 3: Restrictions on Fish Cleaning are Arbitrary and Unnecessary

As a general matter, fish cleaning is not permitted in Sanctuary waters. There is an exception, however, for the cleaning of fish caught in Sanctuary waters. However, pelagic fish do not respect Sanctuary borders. A fishing trip in pursuit of albacore tuna, for example, will necessarily transit the Sanctuary, but the fish may be caught within or without the Sanctuary boundaries. It is typical for fish to be cleaned while returning to port. While all of the fish may be albacore tuna, some are lawful to clean while the cleaning of others is expressly prohibited may result in substantial civil fines and legal fees.

This distinction is without a meaningful difference. The regulation seeks to address a harm that simply does not exist. If the goal is to prevent the discharge of fish parts from a factory processing vessel, then the regulations can be drafted accordingly. Otherwise, this is simply an unenforceable and unnecessary dictate that burdens recreational and small-scale commercial fishing activities in California.

Example 4: Overbroad definition of “introduced species” bars the use of many baits typically used in recreational crabbing.

The Sanctuary Management Plan defines “introduced species” as “a species (including any of its biological material capable of propagation) that is non-native to the ecosystem(s) protected by the sanctuary.” Note that biological material *incapable* of propagation is not included in this definition. Under this definition, anglers could continue to use common crab baits such as poultry parts and carcasses of fish taken elsewhere in California, such as yellowfin or skipjack tuna.

However, the regulations have subtly reworded the definition of introduced species to “any species (including but *not limited to* any of its biological matter capable of propagation) that is non-native to the ecosystems of the Sanctuary.” (Emphasis added). Under this revised definition, any and all biological material of non-native species, irrespective of its capability to propagate the species, is deemed an “introduced specie.” It is unlawful under this regulation to use a striped bass carcass as crab bait even though striped bass are found in the Sanctuary ecosystem. This overbroad definition of introduced species appears unique to the Sanctuaries and is not found elsewhere in state or federal laws or regulations. (California law defines invasive species as “any species, including, but not limited to, the seeds, eggs, spores, or other biological material capable of reproducing that species, or any other viable biological material that enters an ecosystem beyond its historic range.”)

While the issue may seem trivial to some, it is emblematic of the Sanctuaries' overreach in regulations. There is no demonstrable harm from the longstanding use of poultry parts and other "non-native" baits in recreational crabbing. While anglers could switch to other baits, where is the need to do so?

Conclusion

Current Sanctuary regulations substantially burden fishing activities within the Sanctuary without any apparent benefit to the ecosystem. So far, current Sanctuary management has elected not to enforce the regulations as written. However, recreational and commercial anglers ought not be dependent on the beneficence of management, which is subject to change. Unless and until current Sanctuary regulations are amended to remove these burdens on fishing activities, the SAS is compelled to oppose any expansion of the Sanctuary boundaries.

PFMC

06/23/14

Alliance of Communities for Sustainable Fisheries

256 Figueroa Street #1, Monterey, CA 93940

(831) 373-5238

www.alliancefisheries.com

May 20, 2014

Ms. Dorothy Lowman, Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

RE: Expansion, or the Creation of New, National Marine Sanctuaries on the West Coast

Dear Chair Lowman and Council Members,

The Alliance of Communities for Sustainable Fisheries (ACSF) is a 12-year-old 501(c)(3) not-for-profit educational organization, founded to connect fishermen with their communities, and to represent fishing interests in state and federal processes. The ACSF is a regional organization, with commercial fishing leader representatives from Monterey, Moss Landing, Santa Cruz, Morro Bay and Pillar Point harbors and Port San Luis on our Board of Directors. Port communities and several recreational fishing organizations also have representatives on our Board. Thus, the ACSF represents a large cross-section of fishing and community interests for the Central Coast of California. The ACSF was first formed, in part, to create a unified voice for fishing interests in response to the designation of the Monterey Bay as a National Marine Sanctuary (NMS). Thus, our organization has years of experience in working with a NMS.

Recently, proposals have been put forward to either expand existing Sanctuaries, or create new ones, along the West Coast. Many commercial and recreational fishermen, as well as community members, have asked about our experiences with the Monterey Sanctuary, and to a lesser degree the other California Sanctuaries.

The ACSF supports the broad goals of the NMS Program. There are Sanctuary educational and water quality programs, among others, which are of value to our communities. However, our experience is such that we feel that both Congress (in re-authorized National Marine Sanctuary Act (NMSA), and the Magnuson-Stevens Fishery Conservation and Management Act (MSA)), and the NMS Program itself, need to make certain changes or clarifications to the law and Program before it grows or expands. These include:

- 1) Clarify that the MSA is the dominate statute for any fishing- related management issues, including the creation of marine protected areas, inside Sanctuaries and marine National Monuments. The existing language of the NMSA, which some have interpreted as providing Sanctuaries with the ability to override the regional fishery management councils, combined with the repeated statements from the sanctuary leaders that their primary mandate is "resource protection," creates an atmosphere of intense unease among fishermen and other resource users. In the case of Monterey Sanctuary, it used

its prestige in California's Marine Life Protection Act process to lead the effort to create 29 marine reserves or marine conservation areas in the Central Coast of California, while rejecting a fishermen's proposal for a network that took into account socioeconomic needs.

- 2) Scholarly studies of the history and evolution of the NMSA indicate that Congress intends for the Sanctuary Program to balance resource protections, when needed, with multiple use opportunities. This, however, does not appear to be the value of the Program, which appears to tilt toward preservationist management. Congress would do well to make its intent even clearer in a re-authorized NMSA.
- 3) Task the NMSP and individual sites to use robust, peer-reviewed science in management decisions. The Sanctuaries have no equivalent of the Councils' Scientific and Statistical Committees (SSCs), nor any requirement to use the best available science in decision-making. Some Sanctuary science products are quite good; others appear to be advocacy pieces, which would benefit from an independent peer-review.
- 4) Fully comply with the Freedom of Information Act in content and in a timely manner.
- 5) The public in the sanctuary region must have a stronger, independent voice in Sanctuary management decisions. Currently, the main public input to sanctuaries is through "Sanctuary Advisory Councils" (SACs). While these SACs give the appearance of public participation, and are certainly populated by sincere people who are concerned about the health of the ocean, Sanctuary management controls the majority of representation of the SAC, and its agenda. (Perhaps the PFMC recalls recent controversy over the appointment of a fishing representative on the SAC.) These SACs also cannot communicate outside of the NMSP without management permission. Further, the SAC role is to provide advice, which can be accepted -- or ignored. The SAC's are instructed to support the goals of sanctuary management, not to represent the will of the communities. Considering also that the resources of the Sanctuary are viewed by Program managers as national, not local resources, a loss of local control is created. Whether it is through changes in the NMSA, or internal Program changes, it is our experience and advice that the Sanctuary Program will need to solve this problem before communities will want or accept a new level of federal management in areas of the coast so dear to them.
- 6) The Sanctuary Program should explain why expansions, some quite large, do not violate Congressional intent, in as much as there is a prohibition on new sanctuary designations, found in the NMSA, until such time as the Sanctuary Programs shows that it is meeting its goals within its budget.

Fishermen have had at times, a difficult and disappointing relationship with Sanctuaries. For the Monterey Sanctuary, we have had a noteworthy recent improvement with a truly collaborative effort to create recommendations for groundfish essential fish habitat (EFH) boundary adjustments. We very much appreciate this improvement in our relationship, and hope this collaboration continues. The comments made above reflect our overall experience and ways in which, in our opinion, the NMSP can be improved and be made more attractive to future

communities. The ACSF does not believe sanctuaries should be expanded or new ones created until these issues are resolved.

Thank you for considering these comments.

A handwritten signature in black ink, appearing to read "Kathy Fosmark".

Kathy Fosmark

Co-Chair

A handwritten signature in black ink, appearing to read "Frank Emerson".

Frank Emerson

Co-Chair

David Bitts
President
Larry Collins
Vice-President
Duncan MacLean
Secretary
Mike Stiller
Treasurer

PACIFIC COAST FEDERATION of FISHERMEN'S ASSOCIATIONS



W.F. "Zeke" Grader, Jr.
Executive Director
Glen H. Spain
Northwest Regional Director
Vivian Helliwell
Watershed Conservation Director
In Memoriam:
Nathaniel S. Bingham
Harold C. Christensen

Please Respond to:

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23 May 2014

Ms. Maria Brown, Superintendent
Gulf of the Farallones National Marine Sanctuary
Building 991, O'Neill-Ueber Marine Campus
The Presidio
San Francisco, CA 94129

Mr. Dan Howard, Superintendent
Cordell Bank National Marine Sanctuary
1 Bear Valley Road, Pt. Reyes Station
P.O. Box 159
Olema, CA 94950

RE: Proposed Expansion and Regulatory Revision of Gulf of the Farallones and Cordell Bank
National Marine Sanctuaries

Dear Superintendents Brown and Howard:

The Pacific Coast Federation of Fishermen's Associations (PCFFA), representing working men and women in the West Coast commercial fishing fleet, has reviewed the above-entitled notice of proposed boundary expansion and regulatory revision and has the following comments. Please note these are preliminary comments offered at the outset of the public hearing process and additional comments may be submitted prior to the close of comments date.

PREFACE

PCFFA has had a long history working with both the Gulf of the Farallones and the Cordell Banks National Marine Sanctuaries. PCFFA worked for the creation of the original Pt. Reyes-Farallon Islands National Marine Sanctuary (later renamed the Gulf of the Farallones National Marine Sanctuary) in order to provide protection for important fishing grounds and the dependent fisheries, as well as provide protection for one of the world's four major ocean upwelling areas.

Indeed, it was PCFFA that first suggested inclusion of Cordell Bank as part of a Point Reyes/Farallon Islands sanctuary in the early hearings on the creation of the sanctuary. That recommendation was not followed, but later, following undersea photographs of Cordell Bank, Cordell Bank was made a stand-alone marine sanctuary.

STEWARDS OF THE FISHERIES

In recent years, PCFFA worked with former Representative Lynn Woolsey, her staff, and sanctuary staff, on the proposed boundary expansion of the northern boundaries of the two sanctuaries, to ensure traditional fishing activity, as well as the fishing grounds, would be protected under such a boundary expansion.

PCFFA's support for expansion (but not the proposal here) is based on the desire to protect the important fishing grounds and upwelling area encompassed under the expansion of these two sanctuaries. More importantly, however, it is based on the fishing community's long and cordial working relationship and collaboration with past and present management and staff of the two sanctuaries. In fact, there is probably no other government entity – State or Federal – that PCFFA and the fishing community has worked closer with than the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries.

PCFFA is highly troubled now, however, that a five-year review of sanctuary regulations (now in its third year) encompassing some highly controversial proposals for changes in sanctuary management, together with NOAA's attempt to create a "one size fits all" set of national marine sanctuary rules, has been tacked onto proposed sanctuary boundary expansion language.

THE BOUNDARIES – NEED FOR GFNMS SOUTHERN BOUNDARY ADJUSTMENT

PCFFA currently has no preference among the alternatives proposed for the northern boundary expansions of the two sanctuaries. All of the alternatives for expansion would appear to fully encompass the upwelling area warranting protection that is not encompassed currently by the existing northern boundaries of the two sanctuaries.

What is missing in the proposal is the consideration of the need for a southern boundary adjustment for the Gulf of the Farallones National Marine Sanctuary. While the proposed north boundaries expansion would encompass the important area of upwelling, the current Gulf of the Farallones Sanctuary political boundary does not encompass the Gulf of the Farallones' geographical/oceanographic boundary. PCFFA is troubled that, despite numerous comments on the southern boundary issues, NOAA has refused to take action to make this correction. Previously, NOAA did cede, reluctantly, management authority over the southern part of the Gulf of the Farallones, southward of its current political boundary, to Ano Nuevo to the Farallones Sanctuary, nevertheless a southern boundary expansion for that Sanctuary should have been included in a proposal for boundary expansion.

PCFFA recommends an alternative or alternatives in any boundary expansion proposal to move the Gulf of the Farallones sanctuary boundary south to Ano Nuevo (in an area now part of the Monterey Bay National Marine Sanctuary) to reflect the geographic/oceanographic boundaries of the Gulf of the Farallones. Such an adjustment would clarify for the public which sanctuary has authority over these waters and improve conservation and management of sanctuary waters in this area.

TECHINICAL ISSUES TO BE ADDRESSED WITH A NORTHERN BOUNDARY CHANGE

In any northern boundary expansion of the sanctuaries, there are at least three technical issues PCFFA believes must be addressed whether a final proposal is just for a boundary expansion or includes the controversial regulatory package encompassed in the current proposal. They are:

Bodega Bay Maintenance Dredging. Language needs to be developed allowing routine maintenance dredging and nearshore ocean disposal of dredged material from Bodega Bay harbor. The dredging and disposal of dredged materials at Bodega Bay has been occurring for decades with no documentation of adverse impact on the environment. A northern boundaries' sanctuaries expansion would encompass the waters offshore Bodega Bay. For that reason a special dredging provision for this harbor must be included (similar provisions were made for the Port of San Francisco's Golden Gate harbor entrance dredge material disposal when the Gulf of the Farallones Sanctuary was first established in 1981). Without such a provision, the harbor would be left with two very costly alternatives – finding an onshore site or barging dredged materials offshore for disposal outside of the sanctuary boundary. Either of these would be too costly and would have the effect of closing Bodega Bay's harbor. PCFFA understands the Gulf of the Farallones Sanctuary in in discussion with the Corps of Engineers regarding dredge material reuse and encourages this as a preferred method of disposal whenever possible.

Gray Water Discharges from Commercial Fishing Vessels and Recreational Craft. Language needs to be developed for the on-going discharge of non-toxic gray water from commercial fishing vessels and recreational craft. Most of this gray water consists of melted ice, fish slime and scales and entrails from fish dressed (cleaned) at-sea. These types of discharges have been occurring in these waters for over a century, have proven to be benign, and would not endanger sanctuary resources.

Shipwrecks and the use of the Point Arena Pier. There are at least two shipwrecks in the waters adjacent to the Point Arena pier. This area would be encompassed by the proposed northern boundary expansion. While there may be an interest in preserving the shipwreck sites, it is equally important that any preservation effort recognize the ongoing use of the Point Arena pier and not interfere with the historic and current uses of that pier.

REGULATION OF FISHING

PCFFA supported the proposal by former Representative Lynn Woolsey and other members of Congress specifying that management of fisheries within sanctuary waters would remain with existing state and federal fishery entities (i.e., California Department of Fish & Wildlife, California Fish & Game Commission, National Marine Fisheries Service, Pacific Fishery Management Council) in the proposed northern boundary expansion of the two sanctuaries.

PCFFA recognizes, however, the sanctuaries' charge to protect the resources of the waters of the sanctuaries. To that end, Cordell Bank National Marine Sanctuary and the Gulf of the Farallones National Marine Sanctuary have developed a highly successful, albeit informal, method for dealing with conflicts between fishing and the protection of sanctuary resources in the few times a conflict has arisen.

STEWARDS OF THE FISHERIES

When the potential for fishing conflicts with sanctuary purposes has arisen, sanctuary management has contacted the fishing community, communicating the nature of the problem with any proposed solutions, soliciting input from the fishing community, including thoughts on the nature of the conflict and fishing community recommendations for a solution. Both sides have worked in good faith and with mutual respect. If regulatory action was needed, (i.e., beyond an agreement with the fishing community), the two sanctuaries have sought resolution by taking the issue to the California Fish & Game Commission for a state managed fishery, or to the Pacific Fishery Management Council for a federally managed fishery.

This approach has proven highly successful, minimizing interference with fishing while maximizing sanctuary resource protection. The sanctuaries have recognized the authority and expertise of the fishery management entities; the fishery management entities have recognized the sanctuaries' charge to protect sanctuary resources. Indeed, the approach by the two sanctuaries to fishing issues should be a model for the nation; it is the primary reason these two sanctuaries are held in high regard by both the fishing community and fishery management entities.

What concerns PCFFA is that this has been a largely informal process; there is no guarantee this process of addressing fishing issues will be followed by future sanctuary management, much less their overseers at NOAA. PCFFA requests therefore that the current process be formalized in regulation and preferably codified where it would be followed by all of the marine sanctuaries.

As mentioned above, PCFFA supported creation of the sanctuaries, and initial proposals for expansion, to provide additional protection for important fishing grounds and one of the world's great upwelling areas. PCFFA is now very concerned -with the effort by some in NOAA and upper sanctuary office management to slip a stealth fisheries regulatory package into what was a widely supported proposal for the expansion of these two sanctuaries' boundaries. By "stealth fisheries regulation" we mean the designation of so-called "research areas" and "areas of special biological concern." This action, at best, shows bad faith and, at worst, is devious and deceitful.

WAIVERS OF SANCTUARY PROTECTION

Not only has slipping stealth fishery regulations into the boundary expansion been a breach of faith with the public, but one of the proposals would seriously weaken existing sanctuary protections.

PCFFA appreciates and fully supports the continuing ban on offshore oil and gas development within sanctuary waters, but is aghast at the proposal to allow a sanctuary superintendent (or, in fact, that superintendent's superior) to waive sanctuary rules and allow for, among other things:

- Renewable energy development, which could include wave or offshore wind in sanctuary waters. This is particularly troubling since such development could be harmful to

sanctuary resources and there is no compelling reason along the West Coast for this form of offshore energy development given the potential for solar and wind development onshore.

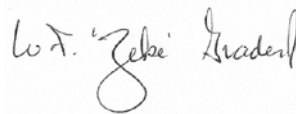
- Disposal of municipal sewage water
- Dumping
- Mining
- Installation of cables on the seafloor
- Expanded shellfish mariculture using non-native species
- Offshore finfish aquaculture with the potential for escapes, marine mammal interactions, pollution (e.g., fecal material from these concentrated “feed lot” types of operation, pesticides used to control sea lice, herbicides used to control algae growth), spread of disease or parasites into the wild, and conflicts with navigation.

These types of non-traditional and harmful activities are exactly what sanctuaries were first established to protect against. Allowing them would be contrary to the purpose of marine sanctuaries; all would be harmful to our fish stocks and fisheries..

CONCLUSION

PCFFA, although a long-time supporter and friend of both the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries, has no option other than to oppose the current proposal that has wrapped a controversial set of regulatory changes into the proposed boundaries expansion. PCFFA urges the expansion be separated from the regulatory change package, and they be dealt with separately. As to the latter, PCFFA believes that any regulatory package should be considered together with a statutory package that, among other things, clarifies the sanctuary - fishery management issue at the national level.

Sincerely,



W.F. “Zeke” Grader, Jr.
Executive Director

cc: The Honorable Barbara Boxer
The Honorable Dianne Feinstein
The Honorable Jared Huffman
Pacific Fishery Management Council
California Fish & Game Commission

LEGISLATIVE MATTERS

The Legislative Committee (LC) will meet by webinar on June 11, 2014 to discuss the status of Magnuson-Stevens Act (MSA) reauthorization and to draft a report that will be finalized at the LC's meeting in conjunction with the Garden Grove Council meeting on Thursday, June 19. The agenda for the June 11 meeting is attached (Agenda Item C.3.a, Attachment 10). All materials for the June 11 webinar are available online at www.pcouncil.org.

MSA Reauthorization Status

On April 3, 2014, Senator Mark Begich released a staff working draft of an MSA reauthorization bill (Agenda Item C.3.a, Attachment 1); and on May 23 Representative Doc Hastings submitted H.R. 4742, a MSA reauthorization bill based on the House discussion draft previously discussed by the LC (Agenda Item C.3.a, Attachment 2). Council staff has developed a marked-up and footnoted version of the MSA that shows proposed changes by both House and Senate (Agenda Item C.3.a, Attachment 3); and a brief summary of differences between the two versions (Agenda Item C.3.a, Attachment 4). The comment period for the Senate discussion draft closed on June 2.

Other Legislation

Council staff has provided a summary of legislation introduced in the 113th U.S. Congress (Agenda Item C.3.a, Attachment 5) for potential review at this meeting. The Council has currently not received any request for comment on these bills.

Council Action:

Consider the LC Report and recommendations regarding H.R. 4742, other MSA reauthorization issues, other legislation, and any other legislative issues that may arise.

Reference Materials:

1. Agenda Item C.3.a, Attachment 1: Senate MSA Reauthorization Discussion Draft.
2. Agenda Item C.3.a, Attachment 2: House MSA Reauthorization bill (HR 4742).
3. Agenda Item C.3.a, Attachment 3: Footnoted Version of MSA with House and Senate Changes.
4. Agenda Item C.3.a, Attachment 4: Summary of Differences between House and Senate Versions of MSA.
5. Agenda Item C.3.a, Attachment 5: Staff Summary of Federal legislation.
6. Agenda Item C.3.a, Attachment 6: Comments of Mid-Atlantic Fishery Management Council on Senate discussion draft.
7. Agenda Item C.3.a, Attachment 7: Comments of the Marine Fisheries Advisory Committee on a Seafood Sustainability Registration Program.
8. Agenda Item C.3.a, Attachment 8: Lowman Response to House Questions following Testimony.
9. Agenda Item C.3.a, Attachment 9: Letter from Salmon Associations Regarding S. 2198.
10. Agenda Item C.3.a, Attachment 10: Agenda from June 11 LC Webinar.

11. Agenda Item C.3.b: Supplemental Legislative Committee Report.

Agenda Order:

- a. Agenda Item Overview
 - b. Report of the Legislative Committee
 - c. Reports and Comments of Advisory Bodies and Management Entities
 - d. Public Comment
 - e. **Council Action:** Consider the Report and Recommendations of the Legislative Committee
- Jennifer Gilden
Dave Hanson

PFMC
05/29/14

[STAFF WORKING DRAFT]

APRIL 3, 2014

113TH CONGRESS
2D SESSION

S. _____

To amend the Magnuson-Stevens Fishery Conservation and Management Act to promote sustainable conservation and management for the Nation's fisheries and the communities that rely on them, and for other purposes.

IN THE SENATE OF THE UNITED STATES

introduced the following bill; which was read twice
and referred to the Committee on _____

A BILL

To amend the Magnuson-Stevens Fishery Conservation and Management Act to promote sustainable conservation and management for the Nation's fisheries and the communities that rely on them, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Magnuson-Stevens Fishery Conservation and Manage-
6 ment Reauthorization Act of 2014”.

1 (b) TABLE OF CONTENTS.—The table of contents of
2 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. References to the Magnuson-Stevens Fishery Conservation and Management Act.
- Sec. 3. Changes in findings, purposes, and policy.
- Sec. 4. Definitions.
- Sec. 5. Authorization of appropriations.

TITLE I—CONSERVATION AND MANAGEMENT

- Sec. 101. Regional fishery management councils.
- Sec. 102. Contents of fishery management plans.
- Sec. 103. Fishery ecosystem planning authority.
- Sec. 104. Action by the Secretary.
- Sec. 105. Other requirements and authority.
- Sec. 106. Prohibited acts.
- Sec. 107. Penalties.
- Sec. 108. Enforcement.
- Sec. 109. Transition to sustainable fisheries; authorization of appropriations.
- Sec. 110. North Pacific fisheries conservation.
- Sec. 111. Summer flounder management.
- Sec. 112. Study of allocations in mixed-use fisheries.

TITLE II—FISHERY INFORMATION, RESEARCH, AND
DEVELOPMENT

- Sec. 201. Electronic monitoring.
- Sec. 202. Cost reduction report.
- Sec. 203. Capital construction.
- Sec. 204. Fisheries research.
- Sec. 205. Improving science.
- Sec. 206. South Atlantic red snapper cooperative research program.
- Sec. 207. Focusing assets for improved fisheries outcomes.

TITLE III—REAUTHORIZATION OF OTHER FISHERY STATUTES

- Sec. 301. Anadromous Fish Conservation Act.
- Sec. 302. Interjurisdictional Fisheries Act of 1986.
- Sec. 303. Atlantic Coastal Fisheries Cooperative Management Act.
- Sec. 304. Atlantic Striped Bass Conservation Act.
- Sec. 305. Yukon River Salmon Act of 2000.
- Sec. 306. State authority for Dungeness crab fishery management.

TITLE IV—INTERNATIONAL

- Sec. 401. Secretarial representative for international fisheries.
- Sec. 402. Amendment to Pacific Salmon Treaty Act of 1985.
- Sec. 403. Reauthorization of Atlantic Tunas Convention Act of 1975.
- Sec. 404. Reauthorization of South Pacific Tuna Act of 1988.
- Sec. 405. High Seas Driftnet Fishing Moratorium Protection Act.
- Sec. 406. Reauthorization of Northwest Atlantic Fisheries Convention Act of 1995.

TITLE V—MISCELLANEOUS

Sec. 501. Technical amendments.

1 **SEC. 2. REFERENCES TO THE MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT.**

3 Except as otherwise expressly provided, wherever in
4 this Act an amendment or repeal is expressed in terms
5 of an amendment to, or repeal of, a section or other provi-
6 sion, the reference shall be considered to be made to a
7 section or other provision of the Magnuson-Stevens Fish-
8 ery Conservation and Management Act (16 U.S.C. 1801
9 et seq.).

10 **SEC. 3. CHANGES IN FINDINGS, PURPOSES, AND POLICY.**

11 (a) FINDINGS.—Section 2(a) (16 U.S.C. 1801(a)) is
12 amended—

13 (1) in paragraph (2), by striking “direct and in-
14 direct habitat losses which have resulted in a dimin-
15 ished capacity to support existing fishing levels” and
16 inserting “natural and human-caused effects on eco-
17 systems, including direct and indirect habitat losses,
18 bycatch mortality, and trophic impacts that have
19 changed the physical, chemical, and ecological proc-
20 esses that support marine ecosystems and resulted
21 in a diminished capacity to support existing fishing
22 levels”;

23 (2) in paragraph (3) by striking “at an ever-in-
24 creasing rate over the past decade”;

1 (3) in paragraph (6), by inserting “and marine
2 ecosystems” after “essential fish habitats”;

3 (4) in paragraph (11), by striking “have dem-
4 onstrated” and inserting “are demonstrating”;

5 (5) by redesignating paragraph (12) as para-
6 graph (17);

7 (6) by inserting before paragraph (17), as re-
8 designated, the following:

9 “(16) Bycatch of living marine resources in
10 United States marine fisheries can have profound
11 population, ecosystem, and socioeconomic effects on
12 United States fishery resources and the communities
13 that depend on those fishery resources.”;

14 (7) by redesignating paragraphs (8) through
15 (11) as paragraphs (12) through (15), respectively;

16 (8) by inserting before paragraph (12), as re-
17 designated, the following:

18 “(11) Forage species are a fundamental compo-
19 nent of marine ecosystems, highly vulnerable to nat-
20 ural population fluctuations and fishing pressure,
21 and are subject to increasing fishing pressure. In
22 most regions of the country there are few, if any,
23 constraints on the rapid development of new fish-
24 eries for forage fish, and the management ap-
25 proaches for the currently developed fisheries for

1 forage fish often put the ecological role of these
2 critically important species at risk.”;

3 (9) by redesignating paragraph (7) as para-
4 graph (10);

5 (10) by inserting before paragraph (10), as re-
6 designated, the following:

7 “(8) By establishing mechanisms, under au-
8 thority of this Act, for specifying science-based an-
9 nual catch limits in fishery management plans at
10 levels such that overfishing does not occur in fish-
11 eries, including measures to ensure accountability,
12 the Nation’s fishery resources are now being man-
13 aged sustainably to prevent overfishing and respond
14 quickly if overfishing occurs.

15 “(9) It is of critical importance to the health of
16 the Nation’s fishery resources and the coastal com-
17 munities that depend on them that the United
18 States maintain its progress in preventing over-
19 fishing and rebuilding overfished stocks.”;

20 (11) by redesignating paragraphs (4) through
21 (6) as paragraphs (5) through (7), respectively; and

22 (12) by inserting after paragraph (3) the fol-
23 lowing:

24 “(4) Subsistence fishing is an integral part of
25 life in many communities throughout the United

1 States, and the Nation’s marine and anadromous
2 fish are important sources of nutrition, subsistence,
3 and the cultural heritage of those communities.”.

4 (b) PURPOSES.—Section 2(b) (16 U.S.C. 1801(b)) is
5 amended—

6 (1) in paragraph (1), by inserting “, and fish-
7 ery resources in the special areas” before the semi-
8 colon;

9 (2) in paragraph (3), by striking “and rec-
10 reational” and inserting “, recreational, and subsist-
11 ence”;

12 (3) in paragraph (5), by striking “the State”
13 and inserting “the States, tribal governments,”;

14 (4) in paragraph (7), by striking “the review of
15 projects” and inserting “projects and activities”;

16 (5) by redesignating paragraphs (5) through
17 (7) as paragraphs (6) through (8), respectively; and

18 (6) by inserting after paragraph (4) the fol-
19 lowing:

20 “(5) to provide for the adoption of ecosystem-
21 based fishery management goals and policies that
22 promote ecosystem health, stability, and sustain-
23 ability, and the conservation and management of
24 fishery resources;”.

1 (c) POLICY.—Section 2(c)(3) (16 U.S.C. 1801(c)(3))
2 is amended—

3 (1) by inserting “, tribes,” after “affected
4 States”;

5 (2) by inserting “tribal,” after “State,”; and

6 (3) by striking “that minimize bycatch and
7 avoid unnecessary waste of fish; and is workable and
8 effective” and inserting “to avoid bycatch, minimize
9 mortality of bycatch that cannot be avoided, and
10 avoid unnecessary waste of fish; and is workable and
11 effective”.

12 **SEC. 4. DEFINITIONS.**

13 (a) IN GENERAL.—Section 3 (16 U.S.C. 1802) is
14 amended—

15 (1) by amending paragraph (2) to read as fol-
16 lows:

17 “(2) The term ‘bycatch’—

18 “(A) means fish that are harvested in a
19 fishery and discarded, including economic dis-
20 cards and regulatory discards, fish that are har-
21 vested in a fishery and retained but not landed,
22 non-target fish that are harvested in a fishery
23 and retained, or fish that are subject to mor-
24 tality due to a direct encounter with fishing
25 gear; and

1 “(B) does not include fish released alive
2 under a recreational catch and release fishery
3 management program.”;

4 (2) by inserting after paragraph (8) the fol-
5 lowing:

6 “(8A) The terms ‘depleted’ and ‘depletion’
7 mean, with respect to a stock of fish in a fishery,
8 that the stock is of a size that jeopardizes the capac-
9 ity of the fishery to produce the maximum sustain-
10 able yield on a continuing basis.”;

11 (3) by inserting after paragraph (18) the fol-
12 lowing:

13 “(18A) The term ‘forage fish’ means any low
14 trophic level fish that contributes significantly to the
15 diets of other fish and that retains a significant role
16 in energy transfer from lower to higher trophic levels
17 throughout its life cycle.”;

18 (4) by inserting after paragraph (30) the fol-
19 lowing:

20 “(30A) The term ‘non-target fish’ means fish
21 that are caught incidentally during the pursuit of
22 target fish in a fishery, including regulatory discards
23 which may or may not be retained for sale or per-
24 sonal use.”;

1 (5) in paragraph (36), by inserting “, tribal,”
2 after “State,”;

3 (6) by inserting after paragraph (42) the fol-
4 lowing:

5 “(42A) The term ‘subsistence fishing’ means
6 fishing in which the fish harvested are intended for
7 customary and traditional uses, including for direct
8 personal or family consumption as food or clothing;
9 for the making or selling of handicraft articles out
10 of nonedible byproducts taken for personal or family
11 consumption, for barter, or sharing for personal or
12 family consumption; and for customary trade. In
13 this paragraph, the term—

14 “(A) ‘family’ means all persons related by
15 blood, marriage, or adoption, or any person liv-
16 ing within the household on a permanent basis;
17 and

18 “(B) ‘barter’ means the exchange of a fish
19 or fish part—

20 “(i) for another fish or fish part; or

21 “(ii) for other food or for nonedible
22 items other than money if the exchange is
23 of a limited and noncommercial nature.

1 “(42B) The term ‘target fish’ means fish that
2 are caught for sale or personal use, including eco-
3 nomic discards.”; and

4 (7) by inserting after paragraph (43) the fol-
5 lowing:

6 “(43A) The terms ‘tribal’ and ‘tribe’ mean an
7 Indian tribe as defined in section 102 of the Feder-
8 ally Recognized Indian Tribe List Act of 1994 (25
9 U.S.C. 479a).”.

10 (b) REDESIGNATION.—Paragraphs (1) through (50)
11 of section 3, as amended by subsection (a) of this section,
12 are redesignated as paragraphs (1) through (56), respec-
13 tively.

14 (c) TECHNICAL AND CONFORMING AMENDMENTS.—

15 (1) Section 7306b(b) of title 10, United States
16 Code, is amended by striking “defined in section
17 3(14)” and inserting “defined in section 3”.

18 (2) Section 3 of the Whale Conservation and
19 Protection Study Act (16 U.S.C. 917a) is amended
20 by striking “including the fishery conservation zone
21 as defined in section 3(8)” and inserting “including
22 the exclusive economic zone as defined in section 3”.

23 (3) Section 114(o) of the Marine Mammal Pro-
24 tection Act of 1972 (16 U.S.C. 1383a(o)) is amend-
25 ed—

1 (A) in paragraph (1), by striking “section
2 3(8)” and inserting “section 3”; and

3 (B) in paragraph (4), by striking “section
4 3(27)” and inserting “section 3”.

5 (4) Section 304(g)(2) (16 U.S.C. 1854(g)(2)) is
6 amended by striking “Notwithstanding section 3(2)”
7 and inserting “Notwithstanding the definition of by-
8 catch under section 3”.

9 (5) Section 8(b)(2) of the Lacey Act Amend-
10 ments of 1981 (16 U.S.C. 3377(b)(2)) is amended—

11 (A) by striking “as defined in paragraph
12 (14) of section 3” and inserting “as defined in
13 section 3”; and

14 (B) by striking “as defined in paragraph
15 (13) of such section 3” and inserting “as de-
16 fined in such section 3”.

17 (6) Section 302 of the Atlantic Salmon Conven-
18 tion Act of 1982 (16 U.S.C. 3601) is amended—

19 (A) in paragraph (6), by striking “in sec-
20 tion 3(10)” and inserting “in section 3” and

21 (B) in paragraph (8), by striking “in sec-
22 tion 3(19)” and inserting “in section 3”.

23 (7) Section 3(6) of the Atlantic Striped Bass
24 Conservation Act (16 U.S.C. 5152(6)) is amended

1 by striking “in section 3(6)” and inserting “in sec-
2 tion 3”.

3 (8) Section 104(f)(4)(B) of the Compact of
4 Free Association Act of 1985 (48 U.S.C.
5 1904(f)(4)(B)) is amended by striking “have the
6 same meanings as provided in paragraphs (10) and
7 (14), respectively, of section 3” and inserting “have
8 the same meanings as provided in section 3”.

9 **SEC. 5. AUTHORIZATION OF APPROPRIATIONS.**

10 Section 4 (16 U.S.C. 1803) is amended to read as
11 follows:

12 **“SEC. 4. AUTHORIZATION OF APPROPRIATIONS.**

13 “There are authorized to be appropriated to the Sec-
14 retary to carry out the provisions of this Act—

15 “(1) **【\$XXX,XXX,XXX】** for fiscal year 2015;

16 “(2) **【\$XXX,XXX,XXX】** for fiscal year 2016;

17 “(3) **【\$XXX,XXX,XXX】** for fiscal year 2017;

18 “(4) **【\$XXX,XXX,XXX】** for fiscal year 2018;

19 “(5) **【\$XXX,XXX,XXX】** for fiscal year 2019;

20 “(6) **【\$XXX,XXX,XXX】** for fiscal year 2020;

21 and

22 “(7) **【\$XXX,XXX,XXX】** for fiscal year

23 2021.”.

1 **TITLE I—CONSERVATION AND**
2 **MANAGEMENT**

3 **SEC. 101. REGIONAL FISHERY MANAGEMENT COUNCILS.**

4 (a) VOTING MEMBERS.—Section 302(b)(2) (16
5 U.S.C. 1852(b)(2)) is amended—

6 (1) in subparagraph (A), by striking “or the
7 commercial or recreational harvest” and inserting
8 “or the commercial, recreational, or subsistence fish-
9 ing harvest”; and

10 (2) in subparagraph (D)—

11 (A) in clause (i)—

12 (i) by striking “Fisheries” and insert-
13 ing “Fishery”; and

14 (ii) by inserting “or the South Atlan-
15 tic Fishery Management Council” after
16 “Council”; and

17 (B) by striking clause (iv).

18 (b) ADDITION OF RHODE ISLAND TO THE MID-AT-
19 LANTIC FISHERY MANAGEMENT COUNCIL.—Section
20 302(a)(1)(B) (16 U.S.C. 1852(a)(1)(B)) is amended—

21 (1) by inserting “Rhode Island,” after “States
22 of”;

23 (2) by inserting “Rhode Island,” after “except
24 North Carolina,”;

25 (3) by striking “21” and inserting “23”; and

1 (4) by striking “13” and inserting “14”.

2 (c) COMMITTEES AND ADVISORY PANELS.—Section
3 302(g)(1)(B) (16 U.S.C. 1852(g)(1)(B)) is amended to
4 read as follows:

5 “(B) Each scientific and statistical com-
6 mittee shall—

7 “(i) provide its Council ongoing sci-
8 entific advice for fishery management deci-
9 sions, including recommendations for ac-
10 ceptable biological catch, preventing over-
11 fishing, maximum sustainable yield, achiev-
12 ing rebuilding targets, goals and objectives
13 of fishery ecosystem plans developed under
14 the discretionary authority provided under
15 section 303B, and reports on stock status
16 and health, bycatch, habitat status, social
17 and economic impacts of management
18 measures, and sustainability of fishing
19 practices;

20 “(ii) develop a control rule to derive
21 annual recommendations for acceptable bi-
22 ological catch for a forage fishery which
23 account for the importance of forage spe-
24 cies to managed fish throughout their
25 range and provide a minimum reference

1 point to determine when a forage fishery
2 should close; and
3 “(iii) carry out the requirements of
4 this subparagraph in a transparent man-
5 ner, allowing for public involvement in the
6 process.”.

7 (d) FUNCTIONS.—Section 302(h) (16 U.S.C.
8 1852(h)) is amended—

9 (1) in paragraph (7)(C), by striking “; and”
10 and inserting a semicolon;

11 (2) by redesignating paragraph (8) as para-
12 graph (10);

13 (3) by redesignating paragraphs (2) through
14 (7) as paragraphs (3) through (8), respectively;

15 (4) by inserting after paragraph (1) the fol-
16 lowing:

17 “(2) review any allocation of fishing privileges
18 among sectors of a mixed-use fishery under a fishery
19 management plan prepared by that Council not less
20 often than once every 5 years, except a Council may
21 delay action for not more than 3 additional 1-year
22 periods;”; and

23 (5) by inserting after paragraph (8), as redesign-
24 nated, the following:

1 “(9) have the authority to use alternative fish-
2 ery management measures in a recreational fishery
3 (or the recreational component of a mixed-use fish-
4 ery), including extraction rates, fishing mortality,
5 and harvest control rules, to the extent they are in
6 accordance with the requirements of this section;
7 and”.

8 (e) WEBCASTS OF COUNCIL MEETINGS.—Section
9 302(i)(2) (16 U.S.C. 1852(i)(2)) is amended by adding
10 at the end the following:

11 “(G) Unless closed in accordance with
12 paragraph (3), each Council shall, where prac-
13 ticable, make available on the Internet website
14 of the Council a video or audio webcast of each
15 meeting of the Council and each meeting of the
16 science and statistical committee of the Council
17 not later than 30 days after the date of the
18 conclusion of such meeting.”.

19 (f) REGIONAL FISHERY MANAGEMENT COUNCILS;
20 PROCEDURAL MATTERS.—Section 302(i) (16 U.S.C.
21 1852(i)) is amended—

22 (1) in paragraph (4), by striking “or State au-
23 thorities” and inserting “, State, or tribal authori-
24 ties”; and

1 (2) in paragraph (6), by striking “Federal
2 agency or from a” and inserting “Federal agency,
3 tribal government, or”.

4 (g) COUNCIL TRAINING PROGRAM; TRAINING
5 COURSE.—Section 302(k)(1) (16 U.S.C. 1852(k)(1)) is
6 amended—

7 (1) by striking “Within 6 months after the date
8 of enactment of the Magnuson-Stevens Fishery Con-
9 servation and Management Reauthorization Act of
10 2006 [enacted Jan. 12, 2007], the” and inserting
11 “The”;

12 (2) in subparagraph (H), by striking “; and”
13 and inserting a semicolon;

14 (3) in subparagraph (I), by striking the period
15 at the end and inserting “; and”; and

16 (4) by adding at the end the following:

17 “(J) ecosystem-based fishery manage-
18 ment.”.

19 **SEC. 102. CONTENTS OF FISHERY MANAGEMENT PLANS.**

20 (a) REQUIRED PROVISIONS.—Section 303 (16 U.S.C.
21 1853) is amended—

22 (1) in subsection (a)—

23 (A) in paragraph (5), by inserting “, and
24 subsistence” after “charter”;

1 (B) in paragraph (13), by striking “and
2 charter” each place it appears and inserting
3 “charter, and subsistence”;

4 (C) in paragraph (14), by striking “and
5 charter fishing sectors in the fishery and;” and
6 inserting “charter, and subsistence fishing sec-
7 tors in the fishery;”;

8 (D) by redesignating paragraphs (14) and
9 (15) as paragraphs (16) and (17), respectively;

10 (E) by inserting after paragraph (13) the
11 following:

12 “(14) in the case of a fishery for a forage
13 fish—

14 “(A) when determining annual catch limits
15 under this Act, assess, specify, and adjust those
16 limits by the feeding requirements of dependent
17 fish throughout the range of the dependent fish;
18 and

19 “(B) include a control rule developed and
20 applied by the scientific and statistical com-
21 mittee of the relevant Council to derive annual
22 recommendations—

23 “(i) for acceptable biological catch for
24 a fishery for forage fish and a minimum

1 reference point to determine when a fish-
2 ery for forage fish should close; and

3 “(ii) that account for the importance
4 of forage fish to managed fish species
5 throughout the range of the managed fish
6 species;

7 “(15) assess the fishery dependent data needs
8 of the fishery and, if necessary to meet those needs,
9 establish an integrated data collection program
10 under subsection (e) to gather and analyze data re-
11 quired for fisheries management; and”;

12 (F) in paragraph (17), as redesignated, by
13 striking “establish a mechanism” and inserting
14 “subject to subsection (d), establish a mecha-
15 nism”; and

16 (2) by adding at the end the following:

17 “(d) LIMITATIONS.—

18 “(1) IN GENERAL.—The requirements under
19 subsection (a)(17) shall not—

20 “(A) apply to a species in a fishery that
21 has a mean life cycle of 18 months or less, or
22 to a species in a fishery with respect to which
23 all spawning and recruitment occurs beyond
24 State waters and the exclusive economic zone,

1 unless the Secretary has determined the fishery
2 is subject to overfishing of that species;

3 “(B) limit or otherwise affect the require-
4 ments of section 301(a)(1) or 304(e) of this
5 Act; and

6 “(C) be construed as requiring that a fish-
7 ery management plan specify a separate annual
8 catch limit and accountability measures for
9 each individual species of non-target fish in the
10 fishery.

11 “(2) CONSTRUCTION.—Nothing in this sub-
12 section shall be construed to affect any effective date
13 regarding the requirements under subsection (a)(17)
14 otherwise provided for under an international agree-
15 ment in which the United States participates.

16 “(e) INTEGRATED DATA COLLECTION.—

17 “(1) IN GENERAL.—Any integrated data collec-
18 tion required by subsection (a)(15) shall—

19 “(A) have scientific data collection as its
20 principal purpose;

21 “(B) specifically consider the requirements
22 of section 301(a)(8);

23 “(C) with respect to any data to be col-
24 lected from a fishing vessel while that vessel is

1 at-sea, give first consideration and priority to
2 the utilization of electronic monitoring;

3 “(D) subject to paragraph (3), provide for
4 a system of fees on a fishery specific basis to
5 be collected from participants in the fishery, in-
6 cluding those persons whose participation is as
7 direct harvesters or bycatch harvesters;

8 “(E) be developed in consultation with
9 stakeholders, including fishery participants,
10 equipment providers in the case of electronic
11 monitoring systems, and contractors in the case
12 of human observers; and

13 “(F) include—

14 “(i) initial performance standards for
15 the fishery;

16 “(ii) field support systems;

17 “(iii) data review procedures; and

18 “(iv) implementation strategies.

19 “(2) IMPORTANCE OF FISHERY RESOURCES TO
20 FISHING COMMUNITIES.—When specifically consid-
21 ering the requirements of section 301(a)(8), the in-
22 tegrated data collection required by subsection
23 (a)(15) may provide, as appropriate, for electronic
24 monitoring, human observers, and dockside moni-
25 toring.

1 “(3) SYSTEM OF FEES.—The system of fees
2 under paragraph (1)(D) shall be consistent with the
3 applicable sections of this title.”.

4 (b) FISHERY MANAGEMENT PLAN AMENDMENTS.—
5 Not later than 1 year after the date of enactment of this
6 Act, each Regional Fishery Management Council shall
7 amend each fishery management plan under its jurisdic-
8 tion to comply with subsections (a)(15) and (e) of section
9 303 of the Magnuson-Stevens Fishery Conservation and
10 Management Act (16 U.S.C. 1853), as amended by section
11 102(a) of this Act.

12 (c) TECHNICAL AND CONFORMING AMENDMENTS.—

13 (1) Section 104 of the Magnuson-Stevens Fish-
14 ery Conservation and Management Reauthorization
15 Act of 2006 (120 Stat. 3584; 16 U.S.C. 1853 note)
16 is amended—

17 (A) by striking subsection (b); and

18 (B) by redesignating subsection (c) as sub-
19 section (b).

20 (2) Section 313(g)(2) (16 U.S.C. 1862(g)(2)) is
21 amended by striking “Notwithstanding section
22 303(d)” and inserting “Notwithstanding section
23 303A”.

24 (3) Section 407(b) (16 U.S.C. 1883(b)) is
25 amended by inserting “as in effect on the day before

1 the date of enactment of Magnuson-Stevens Fishery
2 Conservation and Management Reauthorization Act
3 of 2006 (120 Stat. 3575),” after “In addition to the
4 restrictions under section 303(d)(1)(A)”.

5 (4) Section 53706(a)(7) of title 46, United
6 States Code, is amended by striking “section
7 303(d)(4)” and inserting “section 303A”.

8 **SEC. 103. FISHERY ECOSYSTEM PLANNING AUTHORITY.**

9 (a) IN GENERAL.—Title III (16 U.S.C. 1851 et seq.)
10 is amended by inserting after section 303A the following:

11 **“SEC. 303B. FISHERY ECOSYSTEM PLANNING AUTHORITY.**

12 **“(a) DISCRETIONARY PLANNING AUTHORITY.—**

13 **“(1) COUNCIL AUTHORITY.—**For a fishery or
14 fisheries for which a fishery management plan has
15 been prepared by a Regional Fishery Management
16 Council and approved by the Secretary, the Council
17 may, at the Council’s discretion and in accordance
18 with the provisions of this Act, prepare and submit
19 to the Secretary a fishery ecosystem plan and
20 amendments to such plan as are necessary from
21 time to time or required under subsection (c).

22 **“(2) SECRETARIAL AUTHORITY.—**For a fishery
23 or fisheries for which a fishery management plan
24 has been prepared and approved by the Secretary,
25 the Secretary may, at the Secretary’s discretion and

1 in accordance with the provisions of this Act, pre-
2 pare a fishery ecosystem plan and amendments to
3 such plan as are necessary from time to time or re-
4 quired under subsection (c).

5 “(b) REQUIRED PROVISIONS.—A fishery ecosystem
6 plan that is prepared at the discretion of a Council or the
7 Secretary on or after the date of enactment of the Magnu-
8 son-Stevens Fishery Conservation and Management Reau-
9 thorization Act of 2014 shall—

10 “(1) contain a description of the fishery eco-
11 system and fishery ecosystem context, including—

12 “(A) the geographical extent of the fishery
13 ecosystem;

14 “(B) the biological, physical, chemical, and
15 socioeconomic aspects of the fishery ecosystem;

16 “(C) the goods and services provided by
17 the fishery ecosystem;

18 “(D) the structure and function of the
19 food web, including key predator-prey relation-
20 ships and the habitat needs of different life his-
21 tory stages of key species that make up the
22 food web;

23 “(E) the indicators of fishery ecosystem
24 health; and

1 “(F) the impacts of activities on the fish-
2 ery ecosystem and on indicators of fishery eco-
3 system health, including direct, indirect, and
4 cumulative impacts of activities under the
5 Council’s jurisdiction and outside the Council’s
6 jurisdiction;

7 “(2) specify fishery ecosystem-level goals and
8 objectives for management, including—

9 “(A) identifying and preventing fishing
10 rates or exploitation patterns that jeopardize
11 the maintenance or recovery of the fishery eco-
12 system or biological community structure, func-
13 tion, stability, or resilience;

14 “(B) protecting and restoring species di-
15 versity;

16 “(C) protecting and restoring habitat di-
17 versity and integrity;

18 “(D) protecting and restoring food web
19 structure and function; and

20 “(E) optimizing economic output;

21 “(3) assess the level of uncertainty in fishery
22 ecosystem structure, function, data, and reasonably
23 foreseeable responses to management action;

24 “(4) specify how the uncertainty under para-
25 graph (3) is accounted for in conservation and man-

1 agement measures that achieve the goals and objec-
2 tives under paragraph (2);

3 “(5) contain conservation and management
4 measures—

5 “(A) that achieve the goals and objectives
6 under paragraph (2);

7 “(B) that will be implemented through rel-
8 evant fishery management plans; and

9 “(C) that will not limit or otherwise affect
10 the conservation requirements of the national
11 standards or other provisions of this Act; and

12 “(6) contain a monitoring and evaluation
13 plan—

14 “(A) to describe available data sources and
15 specify information gaps for assessing the per-
16 formance of management in achieving fishery
17 ecosystem-level goals and objectives specified
18 under paragraph (2);

19 “(B) to develop measurable standards and
20 performance measures based on indicators of
21 fishery ecosystem health identified under para-
22 graph (1)(E); and

23 “(C) to measure the achievement of fishery
24 ecosystem-level goals and objectives specified
25 under paragraph (2).

1 “(c) ASSESSMENT AND UPDATING OF PLANS.—

2 “(1) IN GENERAL.—Each fishery ecosystem
3 plan prepared by a Council or the Secretary shall be
4 assessed and updated as necessary to better achieve
5 ecosystem-level goals and objectives.

6 “(2) ASSESSMENT CRITERIA.—A plan assess-
7 ment or update under paragraph (1) shall—

8 “(A) identify research priorities—

9 “(i) to improve monitoring of fishery
10 ecosystem health and understanding of
11 fishery ecosystem processes; and

12 “(ii) to fill data gaps;

13 “(B) analyze progress in meeting fishery
14 ecosystem-level goals and objectives included in
15 the fishery ecosystem plan; and

16 “(C) specify additional actions that shall
17 be taken when practicable to better meet fishery
18 ecosystem-level goals and objectives.

19 “(d) RULE OF CONSTRUCTION.—Nothing in this sec-
20 tion shall be construed as requiring a Council or the Sec-
21 retary to exercise the discretionary planning authority pro-
22 vided by this section.”.

23 (b) CONFORMING AMENDMENT.—The table of con-
24 tents in the Act is amended by inserting after the item
25 relating to section 303A the following:

“303B. Fishery ecosystem planning authority.”.

1 **SEC. 104. ACTION BY THE SECRETARY.**

2 (a) UPDATED AGENCY PROCEDURES.—Not later
3 than 90 days after the date of enactment of this Act, the
4 Secretary of Commerce shall issue a notice of proposed
5 rulemaking to revise and update agency procedures under
6 the mandate of section 304(i) of the Magnuson-Stevens
7 Fishery Conservation and Management Act (16 U.S.C.
8 1854(i)), as added by section 107 of the Magnuson-Ste-
9 vens Fishery Conservation and Management Reauthoriza-
10 tion Act of 2006 (120 Stat. 3594).

11 (b) REVIEW OF PLANS.—Section 304 (16 U.S.C.
12 1854) is amended—

13 (1) in subsection (a)—

14 (A) in paragraph (1), by inserting “, fish-
15 ery ecosystem plan,” after “fishery manage-
16 ment plan”; and

17 (B) in paragraph (5), by inserting “fishery
18 ecosystem plan,” after “fishery management
19 plan,”;

20 (2) in subsection (b), by inserting “fishery eco-
21 system plan,” after “fishery management plan,”
22 each place it appears; and

23 (3) in subsection (c)—

24 (A) in paragraph (1), by inserting “or fish-
25 ery ecosystem plan” after “fishery management
26 plan” each place it appears;

1 (B) in paragraph (3), by inserting “or fish-
2 ery ecosystem plan” after “fishery management
3 plan”;

4 (C) in paragraph (4), by inserting “, fish-
5 ery ecosystem plan,” after “fishery manage-
6 ment plan”; and

7 (D) in paragraph (7), by inserting “with
8 the fishery ecosystem plan,” after “fishery man-
9 agement plan,”.

10 (c) ESTABLISHMENT OF FEES.—Section 304(d) (16
11 U.S.C. 1854(d)) is amended—

12 (1) in paragraph (2)(A)(i), by striking “; and”
13 and inserting a semicolon;

14 (2) in paragraph (2)(A)(ii), by striking the pe-
15 riod at the end and inserting “; and”;

16 (3) in paragraph (2)(A), by adding at the end
17 the following:

18 “(iii) management program that allo-
19 cates a percentage of the total allowable
20 catch to individuals who have formed a
21 sector.”; and

22 (4) by adding at the end the following:

23 “(3) The Secretary shall not collect any fee
24 under this section or section 313(a) before preparing
25 an analysis that identifies the costs that will be re-

1 covered by the fee and the costs that will not be re-
2 covered by the fee. The analysis shall be included in
3 the applicable fisheries management plan.”;

4 (d) REBUILDING OVERFISHED AND DEPLETED
5 FISHERIES.—Section 304(e) (16 U.S.C. 1854(e)) is
6 amended—

7 (1) by amending the heading to read as follows:

8 “(e) REBUILDING OVERFISHED AND OTHERWISE
9 DEPLETED FISHERIES.—”;

10 (2) by amending paragraph (1) to read as fol-
11 lows:

12 “(1) The Secretary shall report annually to the
13 Congress and the Councils on the status of fisheries
14 within each Council’s geographical area of authority
15 and identify those fisheries that are overfished, oth-
16 erwise depleted or are approaching a condition of
17 being overfished or otherwise depleted. For those
18 fisheries managed under a fishery management plan
19 or international agreement, the status shall be deter-
20 mined using the criteria for overfishing (or deple-
21 tion, where applicable) specified in the plan or agree-
22 ment. A fishery shall be classified as approaching a
23 condition of being overfished or otherwise depleted
24 if, based on trends in fishing effort, fishery resource
25 size, and other appropriate factors, the Secretary es-

1 timates that the fishery will become overfished or
2 otherwise depleted within 2 years.”;

3 (3) in paragraph (2), by inserting “or otherwise
4 depleted” after “overfished”;

5 (4) in paragraph (3)(B), by inserting “or other-
6 wise depleted” after “overfished”;

7 (5) in paragraph (4)—

8 (A) in the matter preceding subparagraph
9 (A), by inserting “or otherwise depleted” after
10 “overfished”;

11 (B) in subparagraph (A)(i), by inserting
12 “or otherwise depleted” after “overfished” each
13 place it appears; and

14 (C) by amending subparagraph (A)(ii) to
15 read as follows:

16 “(ii) except in cases where the biology
17 of the stock of fish, other environmental
18 conditions, or management measures under
19 an international agreement in which the
20 United States participates dictate other-
21 wise, not exceed—

22 “(I) the sum of the minimum
23 time required to rebuild an affected
24 stock of fish and the mean generation
25 time of the affected stock of fish, if

1 those time values are scientifically es-
2 tablished and widely accepted among
3 fish population biologists; or

4 “(II) 10 years, if either of the
5 time values specified in subclause (I)
6 is not scientifically established and
7 widely accepted among fish population
8 biologists;”; and

9 (6) in paragraph (5), by striking “that a fishery
10 is overfished” and inserting “that a fishery is over-
11 fished or otherwise depleted”.

12 (e) INTERNATIONAL OVERFISHING.—Section 304 (16
13 U.S.C. 1854) is amended—

14 (1) by striking “(i) INTERNATIONAL OVER-
15 FISHING.—” and inserting “(j) INTERNATIONAL
16 OVERFISHING.—”; and

17 (2) in subsection (j)(1), as redesignated by
18 paragraph (1) of this subsection, by inserting
19 “shall” after “State,”.

20 (f) ANNUAL REPORT ON SPECIAL FUNDS.—Section
21 304 (16 U.S.C. 1854), as amended by subsection (e) of
22 this section, is further amended by inserting at the end
23 the following:

24 “(k) ANNUAL REPORT ON SPECIAL FUNDS.—

1 “(1) ANNUAL REPORT.—Not later than 30 days
2 after the last day of each fiscal year, the Secretary
3 shall submit to the Committee on Commerce,
4 Science, and Transportation of the Senate and the
5 Committee on Natural Resources of the House of
6 Representatives a report for that fiscal year on—

7 “(A) the Western Pacific Sustainable Fish-
8 eries Fund established under section 204(e)(7);

9 “(B) the Limited Access System Adminis-
10 tration Fund established under section
11 305(h)(5)(B);

12 “(C) the North Pacific Fishery Observer
13 Fund established under section 313(d); and

14 “(D) the Fisheries Conservation and Man-
15 agement Fund established under section 208(a)
16 of the Magnuson-Stevens Fishery Conservation
17 and Management Reauthorization Act of 2006
18 (16 U.S.C. 1891b(a)).

19 “(2) REQUIRED INFORMATION.—The annual re-
20 port required under paragraph (1) shall include a
21 detailed accounting of—

22 “(A) all moneys in each fund at the start
23 of the fiscal year;

24 “(B) all moneys deposited in each fund
25 during the fiscal year;

1 “(C) all moneys paid out of each fund dur-
2 ing the fiscal year; and

3 “(D) all projects, programs, and activities
4 funded by each fund during the fiscal year.”.

5 **SEC. 105. OTHER REQUIREMENTS AND AUTHORITY.**

6 (a) FISH HABITAT.—Section 305(b) (16 U.S.C.
7 1855(b)) is amended—

8 (1) in paragraph (3), by inserting “or tribal
9 government” after “or State agency” each place it
10 appears; and

11 (2) in paragraph (4)—

12 (A) by striking “from a Council or Federal
13 or State agency” and inserting “from a Coun-
14 cil, Federal or State agency, or tribal govern-
15 ment”; and

16 (B) by inserting “or tribal government”
17 after “by any State or Federal agency”.

18 (b) JUDICIAL REVIEW.—Section 305(f)(2) (16
19 U.S.C. 1855(f)(2)) is amended by striking “including but
20 not limited to actions that establish the date of closure
21 of a fishery to commercial or recreational fishing” and in-
22 serting “including actions that establish the date of clo-
23 sure of a fishery to commercial, recreational, or subsist-
24 ence fishing”.

1 (c) CONSUMER INFORMATION REGARDING
2 SUSTAINABLY CAUGHT FISH.—Section 305(k) (16 U.S.C.
3 1855(k)) is amended to read as follows:

4 “(k) CONSUMER INFORMATION REGARDING
5 SUSTAINABLY CAUGHT FISH.—

6 “(1) IN GENERAL.—The producer, processor,
7 importer, exporter, distributor, or seller of a fish
8 product may place the words ‘Sustainably Caught’
9 on the fish product and any packaging thereof if—

10 “(A) the fish that comprises or is con-
11 tained in the fish product meets the sustain-
12 ability standard specified in paragraph (2); and

13 “(B) the information specified in para-
14 graph (3) is displayed on the packaging of, or
15 otherwise accompanies, the fish product
16 through processing, distribution, and final sale.

17 “(2) SUSTAINABILITY STANDARD.—

18 “(A) IN GENERAL.—For the purpose of
19 paragraph (1)(A), fish meets the sustainability
20 standard if—

21 “(i) the fish is harvested in accord-
22 ance with—

23 “(I) a fishery management plan
24 prepared and approved under this
25 Act; or

1 “(II) equivalent State, tribal, for-
2 eign, or international conservation and
3 management measures, as determined
4 by the Secretary;

5 “(ii) the fishery from which the fish is
6 harvested is not overfished or otherwise de-
7 pleted; and

8 “(iii) overfishing or other depletion is
9 not occurring in the fishery from which the
10 fish is harvested.

11 “(B) REBUILDING FISHERIES.—A fishery
12 that is subject to a rebuilding plan under this
13 Act, or equivalent conservation and manage-
14 ment measures as determined by the Secretary,
15 meets the criteria specified in clauses (ii) and
16 (iii) of subparagraph (A) if the Secretary deter-
17 mines that the plan is effectively rebuilding the
18 fishery.

19 “(3) REQUIRED INFORMATION.—For the pur-
20 pose of paragraph (1)(B), information is required
21 about the fish that comprises or is contained in a
22 fish product as follows:

23 “(A) The common name.

24 “(B) The scientific name.

25 “(C) The country of origin.

1 “(D) The Federal, State, tribal, foreign, or
2 other entity responsible for overseeing its con-
3 servation and management or cultivation.

4 “(E) If harvested from the wild—

5 “(i) the country of registry of the har-
6 vesting vessel;

7 “(ii) the general method of harvest;
8 and

9 “(iii) the management region.

10 “(F) If cultivated—

11 “(i) the country of cultivation; and

12 “(ii) the method of cultivation, includ-
13 ing whether it is produced through land-
14 based aquaculture, ocean aquaculture, or
15 another method.

16 “(4) DEFINITIONS.—In this subsection:

17 “(A) The term ‘common name’ means the
18 common name used to refer to the fish species
19 in the fishery management plan, or equivalent
20 measures, under which it is conserved and man-
21 aged.

22 “(B) The term ‘fish product’ means a fish
23 or an item that contains fish, which has been
24 harvested, processed, manufactured, or pro-
25 duced for sale or use as food.”.

1 **SEC. 106. PROHIBITED ACTS.**

2 Section 307(1) (16 U.S.C. 1857(1)) is amended—

3 (1) in subparagraph (Q), by striking “; or” and
4 inserting a semicolon;

5 (2) by redesignating subparagraph (R) as sub-
6 paragraph (T); and

7 (3) by inserting after paragraph (Q) the fol-
8 lowing:

9 “(R) to make or submit any incomplete,
10 invalid, or false record, account, or label for, or
11 any false identification of, any fish or fish prod-
12 uct (including false identification of the species,
13 harvesting vessel or nation, or the date or loca-
14 tion where harvested) that has been or is in-
15 tended to be imported, exported, transported,
16 sold, offered for sale, purchased, or received in
17 interstate or foreign commerce, except where
18 such making or submission is prohibited under
19 subparagraph (I);

20 “(S) to place on a fish product, as defined
21 in section 305(k)(4), the words “sustainably
22 caught” or any other word, phrase, mark, or
23 symbol that claims or suggests that the fish
24 that comprises or is contained in the fish prod-
25 uct is sustainably caught if the person knows or
26 reasonably should know—

1 “(i) that the fish does not meet the
2 sustainability standard under section
3 305(k)(2); or

4 “(ii) that the required information
5 specified in section 305(k)(3) is false, mis-
6 leading, incomplete, or not displayed on
7 the packaging of, or otherwise accom-
8 panying, the fish product through proc-
9 essing, distribution, and final sale; or”.

10 **SEC. 107. PENALTIES.**

11 (a) CIVIL PENALTIES AND PERMIT SANCTIONS.—
12 Section 308 (16 U.S.C. 1858) is amended—

13 (1) in subsection (a), by striking
14 “\$100,000” and inserting “\$180,000”; and

15 (2) in subsection (f), by inserting “or investiga-
16 tion of a violation of this Act” after “under this sec-
17 tion”.

18 (b) CRIMINAL PENALTIES.—Section 309(b) (16
19 U.S.C. 1859) is amended—

20 (1) by striking “\$100,000” and inserting
21 “\$180,000”; and

22 (2) by striking “\$200,000” each place it ap-
23 pears and inserting “\$360,000”.

24 **SEC. 108. ENFORCEMENT.**

25 (a) JURISDICTION OF THE COURTS.—

1 (1) IN GENERAL.—Section 311(d) (16 U.S.C.
2 1861(d)) is amended to read as follows:

3 “(d) JURISDICTION OF THE COURTS.—

4 “(1) IN GENERAL.—The district courts of the
5 United States shall have exclusive jurisdiction over
6 any case or controversy arising under the provisions
7 of this Act. Any such court may, at any time—

8 “(A) enter restraining orders or prohibi-
9 tions;

10 “(B) issue warrants, process in rem, or
11 other process;

12 “(C) prescribe and accept satisfactory
13 bonds or other security; and

14 “(D) take such other actions as are in the
15 interest of justice.

16 “(2) HAWAII AND PACIFIC INSULAR AREAS.—In
17 the case of Hawaii or any possession of the United
18 States in the Pacific Ocean, the appropriate court is
19 the United States District Court for the District of
20 Hawaii, except that—

21 “(A) in the case of Guam and Wake Is-
22 land, the appropriate court is the United States
23 District Court for the District of Guam; and

24 “(B) in the case of the Northern Mariana
25 Islands, the appropriate court is the United

1 States District Court for the District of the
2 Northern Mariana Islands.”.

3 (2) CONSTRUCTION.—Nothing in this section,
4 or the amendments made by subsection (a), shall be
5 construed to affect any case or controversy com-
6 menced, or any case or controversy pending before
7 a district court of the United States, prior to the
8 date of enactment of this Act.

9 (b) PAYMENT OF STORAGE, CARE, AND OTHER
10 COSTS.—Section 311(e) (16 U.S.C. 1861(e)) is amend-
11 ed—

12 (1) in paragraph (1), by striking “Notwith-
13 standing any other provision of law” and inserting
14 “IN GENERAL.—”;

15 (2) by redesignating paragraph (2) as para-
16 graph (3);

17 (3) in paragraph (3), as redesignated, by strik-
18 ing “Any person” and inserting “LIABILITY FOR
19 COSTS INCURRED.—Any person”; and

20 (4) by inserting after paragraph (1) the fol-
21 lowing:

22 “(2) FISHERIES ENFORCEMENT FUND.—There
23 is established in the Treasury a non-interest bearing
24 fund to be known as the Fisheries Enforcement
25 Fund, into which shall be deposited all sums re-

1 ceived as described in paragraph (1), which shall re-
2 main available to the Secretary of Commerce until
3 expended as authorized in paragraph (1), without
4 appropriation or fiscal year limitation.”.

5 (c) ADMINISTRATIVE ADJUDICATION.—Section 311
6 (16 U.S.C. 1861) is amended—

7 (1) by redesignating subsections (d) through (j)
8 as subsections (e) through (k), respectively; and

9 (2) by inserting after subsection (c) the fol-
10 lowing:

11 “(d) ADMINISTRATIVE ADJUDICATION.—

12 “(1) IN GENERAL.—Notwithstanding section
13 559 of title 5, United States Code, with respect to
14 any marine resource conservation law or regulation
15 administered by the Secretary acting through the
16 National Oceanic and Atmospheric Administration,
17 all adjudicatory functions that are required by chap-
18 ter 5 of title 5, United States Code to be performed
19 by an administrative law judge may be performed by
20 another Federal agency on a reimbursable basis.

21 “(2) DETAILS.—If another Federal agency per-
22 forming adjudicatory functions under paragraph (1)
23 requires the detail of an administrative law judge to
24 perform any of these functions, it may request tem-
25 porary or occasional assistance from the Office of

1 Personnel Management under section 3344 of title
2 5, United States Code.”.

3 (d) REPEALS.—Sections 110 and 111 of title I of Di-
4 vision B of the Consolidated and Further Continuing Ap-
5 propriations Act, 2012 (Public Law 112—55; 16 U.S.C.
6 1861 note), and the items relating to those sections in the
7 table of contents for that Act, are repealed.

8 (e) ANNUAL REPORT ON SPECIAL FUNDS.—Section
9 304(k), as added by section 104(f) of this Act, is amend-
10 ed—

11 (1) in paragraph (1)(C), by striking “; and”
12 and inserting a semicolon;

13 (2) in paragraph (1)(D), by striking
14 “2006.” and inserting “2006; and”; and

15 (3) by inserting at the end the following:

16 “(E) the Fisheries Enforcement Fund es-
17 tablished under section 311(f)(2).”.

18 (f) CONFORMING AMENDMENTS.—

19 (1) CIVIL FORFEITURES.—Section 310 (16
20 U.S.C. 1860) is amended—

21 (A) in subsection (b), by striking “section
22 311(d)” and inserting “subsection 311(e)”; and

23 (B) in subsection (d), by striking “section
24 311(d)” each place it appears and inserting
25 “subsection 311(e)”.

1 (2) ENFORCEMENT; NORTH ATLANTIC SALMON
2 FISHING.—Section 308 of the Atlantic Salmon Con-
3 vention Act of 1982 (16 U.S.C. 3607) is amended
4 by striking “and (d)” each place it appears and in-
5 serting “and (e)”.

6 **SEC. 109. TRANSITION TO SUSTAINABLE FISHERIES; AU-**
7 **THORIZATION OF APPROPRIATIONS.**

8 Section 312(a)(4) (16 U.S.C. 1861a(a)(4)) is amend-
9 ed—

10 (1) by inserting “to carry out this subsection”
11 after “necessary”; and

12 (2) by striking “2007 through 2013” and in-
13 serting “2015 through 2021”.

14 **SEC. 110. NORTH PACIFIC FISHERIES CONSERVATION.**

15 (a) ELECTRONIC MONITORING SYSTEMS.—Section
16 313 (16 U.S.C. 1862) is amended—

17 (1) in subsection (a)—

18 (A) in the sentence preceding paragraph
19 (1), by striking “jurisdiction except a salmon
20 fishery which” and inserting “jurisdiction, ex-
21 cept a salmon fishery, that”;

22 (B) in paragraph (1), by inserting “elec-
23 tronic monitoring systems or” before “observ-
24 ers”; and

1 (C) by amending paragraph (2) to read as
2 follows:

3 “(2) establish a system of fees to pay for the
4 cost of implementing the plan and any integrated
5 data collection program, including electronic moni-
6 toring, established under subsections (a)(15) and (e)
7 of section 303;” and

8 (2) in subsection (b)—

9 (A) in paragraph (1)(A), by inserting
10 “placing electronic monitoring systems or” be-
11 fore “stationing observers on”;

12 (B) in paragraph (2)(E), by inserting “ac-
13 tual electronic monitoring system costs or” be-
14 fore “actual observer costs”; and

15 (C) by adding at the end the following:

16 “(3) Any system of fees established under this
17 section may vary by fishery, management area, elec-
18 tronic monitoring system, or observer coverage
19 level.”.

20 (b) ARCTIC COMMUNITY DEVELOPMENT QUOTA.—

21 Section 313 (16 U.S.C. 1862) is amended by adding at
22 the end the following:

23 “(k) ARCTIC COMMUNITY DEVELOPMENT QUOTA.—

24 If the North Pacific Fishery Management Council issues
25 a fishery management plan for the exclusive economic zone

1 in the Arctic Ocean, or an amendment to its current Fish-
2 ery Management Plan for Fish Resources of the Arctic
3 Management Area, that makes available to commercial
4 fishing and establishes a sustainable harvest level for any
5 part of such zone, the North Pacific Fishery Management
6 Council shall set aside not less than 10 percent of the total
7 allowable catch therein as a community development quota
8 for coastal villages north and east of the Bering Strait.”.

9 **SEC. 111. SUMMER FLOUNDER MANAGEMENT.**

10 (a) IN GENERAL.—Not later than 1 year after the
11 date of the enactment of this Act, the Mid-Atlantic Fish-
12 ery Management Council shall submit to the Secretary of
13 Commerce, and the Secretary of Commerce may approve,
14 a modified fishery management plan or plan amendment
15 for the commercial and recreational management of sum-
16 mer flounder (*Paralichthys dentatus*) under the Magnu-
17 son-Stevens Fishery Conservation and Management Act
18 (16 U.S.C. 1801 et seq.). The modified fishery manage-
19 ment plan or plan amendment shall—

20 (1) be based on the best scientific information
21 available;

22 (2) reflect changes in the distribution, abun-
23 dance, and location of summer flounder in estab-
24 lishing distribution of the commercial and rec-
25 reational catch quotas;

1 (3) consider regional, coast-wide, or other man-
2 agement measures for summer flounder that comply
3 with the National Standards under section 301(a) of
4 the Magnuson-Stevens Fishery Conservation and
5 Management Act (16 U.S.C. 1851(a)); and

6 (4) prohibit the allocation of commercial or rec-
7 reational catch quotas for summer flounder on a
8 State-by-State basis using historical landings data
9 that does not reflect the status of the summer floun-
10 der stock, based on the most recent scientific infor-
11 mation.

12 (b) CONSULTATION WITH THE COMMISSION.—In
13 preparing the modified fishery management plan or plan
14 amendment as described in subsection (a), the Council
15 shall consult with the Atlantic States Marine Fisheries
16 Commission to ensure consistent management throughout
17 the range of the fishery.

18 (c) FAILURE TO SUBMIT PLAN.—If the Council fails
19 to submit a modified fishery management plan or plan
20 amendment as described in subsection (a) that may be ap-
21 proved by the Secretary, the Secretary shall prepare and
22 approve such a modified plan or plan amendment.

23 (d) REPORT.—Not later than 1 year after the date
24 of the approval of a modified fishery management plan
25 or plan amendment as described in subsection (a), the

1 Comptroller General of the United States shall submit to
2 the Committee on Commerce, Science, and Transportation
3 of the Senate and the Committee on Natural Resources
4 of the House of Representatives a report on the implemen-
5 tation of the modified plan or plan amendment that in-
6 cludes an assessment of whether the implementation com-
7 plies with the national standards for fishery conservation
8 and management under section 301(a) of the Magnuson-
9 Stevens Fishery Conservation and Management Act (16
10 U.S.C. 1851(a)).

11 **SEC. 112. STUDY OF ALLOCATIONS IN MIXED-USE FISH-**
12 **ERIES.**

13 (a) STUDY REQUIREMENTS.—The National Academy
14 of Sciences, in coordination with the Assistant Adminis-
15 trator for Fisheries of the Department of Commerce, shall
16 conduct a study—

17 (1) to determine which variables, including con-
18 sideration of the conservation and socioeconomic
19 benefits of each sector in a fishery, should be consid-
20 ered by a Regional Fishery Management Council es-
21 tablished under section 302 of the Magnuson-Ste-
22 vens Fishery Conservation and Management Act (16
23 U.S.C. 1852) in allocating fishing privileges in a
24 fishery management plan prepared under that Act;
25 and

1 (2) to determine which sources should be used
2 for such variables.

3 (b) REPORT.—Not later than 180 days after the date
4 of enactment of this Act, the National Academy of
5 Sciences shall submit a report on the study conducted
6 under subsection (a) to the Committee on Commerce,
7 Science, and Transportation of the Senate and the Com-
8 mittee on Natural Resources of the House of Representa-
9 tives.

10 **TITLE II—FISHERY INFORMA-**
11 **TION, RESEARCH, AND DE-**
12 **VELOPMENT**

13 **SEC. 201. ELECTRONIC MONITORING.**

14 (a) SENSE OF CONGRESS.—It is the sense of Con-
15 gress that the use of technologies such as digital video
16 cameras and monitors, digital recording systems, and
17 other forms of electronic monitoring as a complement to
18 observers can maintain or increase observer information
19 collected from fisheries while reducing the need for observ-
20 ers and the financial costs and logistical difficulties associ-
21 ated with such observers.

22 (b) ELECTRONIC MONITORING REVIEW.—Not later
23 than 180 days after the date of enactment of this Act,
24 the Secretary of Commerce, in consultation with the Re-
25 gional Fishery Management Councils, shall complete and

1 submit to the Committee on Commerce, Science, and
2 Transportation of the Senate and the Committee on Nat-
3 ural Resources of the House of Representatives a review
4 of all Federal fishery management plans that—

5 (1) identifies each fishery management plan
6 with respect to which the incorporation of electronic
7 monitoring, as a complement to observers, can de-
8 crease costs and improve efficiencies in the fishery
9 while continuing to meet the standards and require-
10 ments of the Magnuson-Stevens Fishery Conserva-
11 tion and Management Act (16 U.S.C. 1801 et seq.);
12 and

13 (2) specifies for each fishery management plan
14 identified which type or types of electronic moni-
15 toring technology can achieve such cost and effi-
16 ciency improvements.

17 (c) REGIONAL ELECTRONIC MONITORING ADOPTION
18 PLANS.—

19 (1) IN GENERAL.—Not later than 1 year after
20 submitting the results of the review required under
21 subsection (b), each Regional Fishery Management
22 Council, in consultation with the Secretary of Com-
23 merce, shall develop a plan to adopt and implement
24 electronic monitoring in each of its fishery manage-
25 ment plans identified in the review.

1 (2) ELEMENTS OF PLANS.—Each plan required
2 by this subsection

3 (A) shall include an estimate of anticipated
4 improvements in cost effectiveness and manage-
5 ment efficiency for each Federal fishery man-
6 agement plan in the plan;

7 (B) shall prioritize fishery management
8 plans in each region, to guide development,
9 adoption, and implementation of electronic
10 monitoring amendments to such plans;

11 (C) shall set forth an implementation
12 schedule, consistent with the implementation
13 deadline specified in subsection (d), for the de-
14 velopment, review, adoption, and implementa-
15 tion of electronic monitoring amendments to
16 Federal fishery management plans; and

17 (D) may be reviewed or amended annually
18 to address changing circumstances or improve-
19 ments in technology.

20 (d) DEADLINE FOR IMPLEMENTATION.—Not later
21 than 4 years after the date of enactment of this Act, the
22 Regional Fishery Management Councils and the Secretary
23 of Commerce shall complete implementation of the plans
24 developed under subsection (c).

1 **SEC. 202. COST REDUCTION REPORT.**

2 Not later than 1 year after the date of enactment
3 of this Act, the Secretary of Commerce, in consultation
4 with the Regional Fishery Management Councils, shall
5 submit a report to Congress that, with respect to each
6 fishery governed by a fishery management plan in effect
7 under the Magnuson-Stevens Fishery Conservation and
8 Management Act (16 U.S.C. 1801 et seq.)—

9 (1) identifies the goals of the applicable pro-
10 grams governing monitoring and enforcement of
11 fishing that is subject to the plan;

12 (2) identifies methods to accomplish the goals
13 under paragraph (1), including human observers,
14 electronic monitoring, and vessel monitoring sys-
15 tems;

16 (3) certifies the methods under paragraph (2)
17 that are most cost-effective for fishing that is sub-
18 ject to the plan; and

19 (4) explains why the most-cost-effective meth-
20 ods under paragraph (3) are not required, if applica-
21 ble.

22 **SEC. 203. CAPITAL CONSTRUCTION.**

23 (a) DEFINITIONS; ELIGIBLE AND QUALIFIED FISH-
24 ERY FACILITIES.—Section 53501 of title 46, United
25 States Code, is amended—

1 (1) by striking “(7) UNITED STATES FOREIGN
2 TRADE.—” and inserting “(11) UNITED STATES
3 FOREIGN TRADE.—”;

4 (2) by striking “(8) VESSEL.—” and inserting
5 “(12) VESSEL.—”;

6 (3) by redesignating paragraphs (5), (6), and
7 (7) as paragraphs (8), (9), and (10), respectively;

8 (4) by redesignating paragraphs (2), (3), and
9 (4) as paragraphs (4), (5), and (6), respectively;

10 (5) by redesignating paragraph (1) as para-
11 graph (2);

12 (6) by inserting before paragraph (2), as redes-
13 ignated, the following:

14 “(1) AGREEMENT FISHERY FACILITY.—The
15 term ‘agreement fishery facility’ means an eligible
16 fishery facility or a qualified fishery facility that is
17 subject to an agreement under this chapter.”;

18 (7) by inserting after paragraph (2), as redesig-
19 nated, the following:

20 “(3) ELIGIBLE FISHERY FACILITY.—

21 “(A) IN GENERAL.—Subject to subpara-
22 graph (B), the term “eligible fishery facility”
23 means—

24 “(i) for operations on land—

1 “(I) a structure or an appur-
2 tenance thereto designed for unload-
3 ing and receiving from a vessel, proc-
4 essing, holding pending processing,
5 distribution after processing, or hold-
6 ing pending distribution, of fish from
7 a fishery;

8 “(II) the land necessary for the
9 structure or appurtenance described
10 in subclause (I); and

11 “(III) equipment that is for use
12 with the structure or appurtenance
13 that is necessary to perform a func-
14 tion described in subclause (I);

15 “(ii) for operations not on land, a ves-
16 sel built in the United States and used for,
17 equipped to be used for, or of a type nor-
18 mally used for, processing fish; or

19 “(iii) for aquaculture, including oper-
20 ations on land or elsewhere—

21 “(I) a structure or an appur-
22 tenance thereto designed for aqua-
23 culture;

24 “(II) the land necessary for the
25 structure or appurtenance;

1 “(III) equipment that is for use
2 with the structure or appurtenance
3 and that is necessary to perform a
4 function described in subclause (I);
5 and

6 “(IV) a vessel built in the United
7 States and used for, equipped to be
8 used for, or of a type normally used
9 for, aquaculture.

10 “(B) OWNERSHIP REQUIREMENT.—Under
11 subparagraph (A), the structure, appurtenance,
12 land, equipment, or vessel shall be owned by—

13 “(i) an individual who is a citizen of
14 the United States; or

15 “(ii) an entity that is—

16 “(I) a citizen of the United
17 States under section 50501 of this
18 title; and

19 “(II) at least 75 percent owned
20 by citizens of the United States, as
21 determined under section 50501 of
22 this title.”; and

23 (8) by inserting after paragraph (6), as redesign-
24 nated, the following:

25 “(7) QUALIFIED FISHERY FACILITY.—

1 “(A) IN GENERAL.—Subject to subpara-
2 graph (B), the term ‘qualified fishery facility’
3 means—

4 “(i) for operations on land—

5 “(I) a structure or an appur-
6 tenance thereto designed for unload-
7 ing and receiving from a vessel, proc-
8 essing, holding pending processing,
9 distribution after processing, or hold-
10 ing pending distribution, of fish from
11 a fishery;

12 “(II) the land necessary for the
13 structure or appurtenance; and

14 “(III) equipment that is for use
15 with the structure or appurtenance
16 and necessary to perform a function
17 described in subclause (I);

18 “(ii) for operations not on land, a ves-
19 sel built in the United States and used for,
20 equipped to be used for, or of a type nor-
21 mally used for, processing fish; or

22 “(iii) for aquaculture, including oper-
23 ations on land or elsewhere—

1 “(I) a structure or an appur-
2 tenance thereto designed for aqua-
3 culture;

4 “(II) the land necessary for the
5 structure or appurtenance;

6 “(III) equipment that is for use
7 with the structure or appurtenance
8 and necessary for performing a func-
9 tion described in subclause (I); and

10 “(IV) a vessel built in the United
11 States.

12 “(B) OWNERSHIP REQUIREMENT.—Under
13 subparagraph (A), the structure, appurtenance,
14 land, equipment, or vessel shall be owned by—

15 “(i) an individual who is a citizen of
16 the United States; or

17 “(ii) an entity that is—

18 “(I) a citizen of the United
19 States under section 50501 of this
20 title; and

21 “(II) at least 75 percent owned
22 by citizens of the United States, as
23 determined under section 50501 of
24 this title.”.

25 (b) ELIGIBLE FISHERY FACILITIES.—

1 (1) DEFINITION OF SECRETARY.—Section
2 53501 of title 46, United States Code, as amended
3 by subsection (a) of this section is further amended
4 in paragraph (9)(A), by inserting “, and an eligible
5 fishery facility or a qualified fishery facility” after
6 “United States”.

7 (2) ESTABLISHING A CAPITAL CONSTRUCTION
8 FUND.—Section 53503 of title 46, United States
9 Code, is amended—

10 (A) in subsection (a)—

11 (i) by inserting “or eligible fishery fa-
12 cility” after “eligible vessel”; and

13 (ii) by inserting “or fishery facility”
14 after “the vessel”; and

15 (B) in subsection (b)—

16 (i) by designating the text that follows
17 after “The purpose of the agreement shall
18 be” as paragraph (1) and indenting appro-
19 priately;

20 (ii) in paragraph (1), as designated,
21 by striking “United States.” and inserting
22 “United States; or”; and

23 (iii) by inserting after paragraph (1),
24 as designated, the following:

1 “(2) to provide for the acquisition, construction,
2 or reconstruction of a fishery facility owned by—

3 “(A) an individual who is a citizen of the
4 United States; or

5 “(B) an entity that is—

6 “(i) a citizen of the United States
7 under section 50501; and

8 “(ii) at least 75 percent owned by citi-
9 zens of the United States, as determined
10 under section 50501.”.

11 (c) AGREEMENT FISHERY FACILITIES.—

12 (1) DEPOSITS AND WITHDRAWALS.—Section
13 53504(b) of title 46, United States Code, is amend-
14 ed by inserting “or an agreement fishery facility”
15 after “agreement vessel”.

16 (2) CEILING ON DEPOSITS.—Section 53505 of
17 title 46, United States Code, is amended—

18 (A) in paragraphs (1) and (2) of sub-
19 section (a), by inserting “or agreement fishery
20 facilities” after “agreement vessels”;

21 (B) in subsection (a)(3) by inserting “or
22 agreement fishery facility” after “agreement
23 vessel” each place it appears; and

24 (C) in subsection (b)—

- 1 (i) by inserting “or agreement fishery
2 facility” after “an agreement vessel”; and
3 (ii) by inserting “or fishery facility”
4 after “the vessel”.

5 (d) QUALIFIED FISHERY FACILITIES.—

6 (1) QUALIFIED WITHDRAWALS.—Section
7 53509(a) of title 46, United States Code, is amend-
8 ed—

9 (A) in paragraph (1), by striking “quali-
10 fied vessel; or” and inserting “qualified vessel,
11 or the acquisition, construction, or reconstruc-
12 tion of a qualified fishery facility; or”; and

13 (B) in paragraph (2), by striking “quali-
14 fied vessel.” and inserting “qualified vessel, or
15 the acquisition, construction, or reconstruction,
16 of a qualified fishery facility.”.

17 (2) TAX TREATMENT OF QUALIFIED WITH-
18 DRAWALS AND BASIS OF PROPERTY.—Section 53510
19 of title 46, United States Code, is amended—

20 (A) in subsections (b) and (c), by striking
21 “or container” each place it appears and insert-
22 ing “container, or fishery facility”; and

23 (B) in subsection (d), by striking “and
24 containers” and inserting “containers, and fish-
25 ery facilities”.

1 (3) TAX TREATMENT OF NONQUALIFIED WITH-
2 DRAWALS.—Section 53511(e)(4) of title 46, United
3 States Code, is amended by inserting “or fishery fa-
4 cility” after “vessel”.

5 (e) TECHNICAL AMENDMENT.—Section 53501 of
6 title 46, United States Code, as amended by subsection
7 (a) of this section, is further amended in paragraph
8 (8)(A)(iii), by striking “trade trade” and inserting
9 “trade”.

10 **SEC. 204. FISHERIES RESEARCH.**

11 (a) DEFINITION OF STOCK ASSESSMENT.—Section 3
12 (16 U.S.C. 1802), as amended by section 4 of this Act,
13 is further amended by redesignating paragraphs (45)
14 through (56) as paragraphs (46) through (57), and by in-
15 serting after paragraph (44) the following:

16 “(45) The term ‘stock assessment’ means an
17 evaluation of the past, present, and future status of
18 a stock of fish, that includes—

19 “(A) a range of life history characteristics
20 for the stock, including—

21 “(i) the geographical boundaries of
22 the stock; and

23 “(ii) information on age, growth, nat-
24 ural mortality, sexual maturity and repro-

1 duction, feeding habits, and habitat pref-
2 erences of the stock; and

3 “(B) fishing for the stock.”.

4 (b) STOCK ASSESSMENT PLAN.—Section 404 (16
5 U.S.C. 1881c) is amended by adding at the end the fol-
6 lowing:

7 “(e) STOCK ASSESSMENT PLAN.—

8 “(1) IN GENERAL.—The Secretary shall develop
9 and publish in the Federal Register, on the same
10 schedule as required for the strategic plan required
11 under section 404(b) of such Act, a plan to conduct
12 stock assessments for all stocks of fish for which a
13 fishery management plan is in effect under this Act.

14 “(2) CONTENTS.—The plan shall—

15 “(A) for each stock of fish for which a
16 stock assessment has previously been con-
17 ducted—

18 “(i) establish a schedule for updating
19 the stock assessment that is reasonable
20 given the biology and characteristics of the
21 stock; and

22 “(ii) subject to the availability of ap-
23 propriations, require completion of a new
24 stock assessment, or an update of the most
25 recent stock assessment—

1 “(I) every 5 years, except a
2 Council may delay action for not more
3 than 3 additional 1-year periods; or

4 “(II) within such other time pe-
5 riod specified and justified by the Sec-
6 retary in the plan;

7 “(B) for each stock of fish for which a
8 stock assessment has not previously been con-
9 ducted—

10 “(i) establish a schedule for con-
11 ducting an initial stock assessment that is
12 reasonable given the biology and character-
13 istics of the stock; and

14 “(ii) subject to the availability of ap-
15 propriations, require completion of the ini-
16 tial stock assessment not later than 3
17 years after the date that the plan is pub-
18 lished in the Federal Register unless an-
19 other time period is specified and justified
20 by the Secretary in the plan; and

21 “(C) identify data and analysis, especially
22 concerning recreational fishing, that, if avail-
23 able, would reduce uncertainty in and improve
24 the accuracy of future stock assessments, in-
25 cluding whether that data and analysis could be

1 provided by nongovernmental sources, including
2 fishermen, fishing communities, universities,
3 and research institutions.

4 “(3) WAIVER OF STOCK ASSESSMENT REQUIRE-
5 MENT.—Notwithstanding subparagraphs (A)(ii) and
6 (B)(ii) of paragraph (2), a stock assessment shall
7 not be required for a stock of fish in the plan if the
8 Secretary determines that such a stock assessment
9 is not necessary and justifies the determination in
10 the Federal Register notice required by this sub-
11 section.”.

12 (c) DEADLINE.—Notwithstanding paragraph (1) of
13 section 404(e) of the Magnuson-Stevens Fishery Con-
14 servation and Management Act, as amended by this sec-
15 tion, the Secretary of Commerce shall issue the first stock
16 assessment plan under that section by not later than 1
17 year after the date of enactment of this Act.

18 (d) STRATEGIC PLAN.—Section 404(b)(5) (16 U.S.C.
19 1881c(b)(5)) is amended by striking “and affected States,
20 and provide for coordination with the Councils, affected
21 States, and other research entities” and inserting “, af-
22 fected States, and tribal governments, and provide for co-
23 ordination with the Councils, affected States, tribal gov-
24 ernments, and other research entities”.

1 **SEC. 205. IMPROVING SCIENCE.**

2 (a) INCORPORATION OF INFORMATION FROM WIDE
3 VARIETY OF SOURCES.—Section 2 (16 U.S.C. 1801), as
4 amended by section 3 of this Act, is further amended by
5 adding at the end of subsection (a)(10) the following:
6 “Fisheries management is most effective when it incor-
7 porates information provided by governmental and non-
8 governmental sources, including State and Federal agency
9 staff, fishermen, fishing communities, universities, re-
10 search institutions, and other appropriate entities. As ap-
11 propriate, that information should be considered the best
12 scientific information available and form the basis of con-
13 servation and management measures as required by this
14 Act.”.

15 (b) IMPROVING DATA COLLECTION AND ANALYSIS.—

16 (1) IN GENERAL.—Section 404 (16 U.S.C.
17 1881c), as amended by section 204 of this Act, is
18 further amended by adding at the end the following:

19 “(f) IMPROVING DATA COLLECTION AND ANAL-
20 YSIS.—

21 “(1) IN GENERAL.—The Secretary, in consulta-
22 tion with the science and statistical committee of the
23 Councils established under section 302(g), shall de-
24 velop and publish in the Federal Register guidelines
25 that will facilitate greater incorporation of data,
26 analysis, and stock assessments from nongovern-

1 mental sources, including fishermen, fishing commu-
2 nities, universities, and research institutions, into
3 fisheries management decisions.

4 “(2) CONTENT.—The guidelines shall—

5 “(A) identify types of data and analysis,
6 especially concerning recreational fishing, that
7 can be reliably used as the best scientific infor-
8 mation available for purposes of this Act and
9 the basis for establishing conservation and man-
10 agement measures as required by section
11 303(a)(1), including setting standards for the
12 collection and use of that data and analysis in
13 stock assessments and for other purposes;

14 “(B) provide specific guidance for col-
15 lecting data and performing analyses identified
16 as necessary to reduce the uncertainty referred
17 to in section 404(e)(2)(C); and

18 “(C) establish a registry of persons pro-
19 viding such information.

20 “(3) ACCEPTANCE AND USE OF DATA AND
21 ANALYSES.—The Secretary and Regional Fishery
22 Management Councils shall—

23 “(A) use all data and analyses that meet
24 the guidelines published under paragraph (1) as
25 the best scientific information available for pur-

1 poses of this Act in fisheries management deci-
2 sions, unless otherwise determined by the
3 science and statistical committee of the Coun-
4 cils established under section 302(g) of this
5 Act;

6 “(B) explain in the Federal Register notice
7 announcing the fishery management decision
8 how the data and analyses under subparagraph
9 (A) have been used to establish conservation
10 and management measures; and

11 “(C) if any data or analysis under sub-
12 paragraph (A) is not used, provide in the Fed-
13 eral Register notice announcing the fishery
14 management decision an explanation developed
15 by such science and statistical committee of
16 why that data or analysis was not used.”.

17 (c) DEADLINE.—The Secretary of Commerce shall
18 develop and publish guidelines under the amendment
19 made by subsection (a) not later than 1 year after the
20 date of enactment of this Act.

21 (d) INFORMATION COLLECTION; CONTRACTING AU-
22 THORITY.—

23 Section 402(d) (16 U.S.C. 1881a(d)) is amended by
24 inserting “tribal government,” before “Council” each
25 place it appears.

1 **SEC. 206. SOUTH ATLANTIC RED SNAPPER COOPERATIVE**
2 **RESEARCH PROGRAM.**

3 (a) IN GENERAL.—Title IV (16 U.S.C. 1881 et seq.)
4 is amended—

5 (1) by redesignating section 408 as section 409;
6 and

7 (2) by inserting after section 407 the following:

8 **“SEC. 408. SOUTH ATLANTIC RED SNAPPER COOPERATIVE**
9 **RESEARCH PROGRAM.**

10 “(a) RESEARCH PROGRAM REQUIRED.—Not later
11 than 90 days after the date of enactment of this Act, the
12 Secretary of Commerce, in consultation with the South At-
13 lantic Fishery Management Council, shall commence car-
14 rying out a research program to assess the status of the
15 red snapper fishery in the South Atlantic.

16 “(b) DURATION.—Subject to subsection (g), the re-
17 search program shall be carried out during the 6-year pe-
18 riod beginning on the date of the commencement of the
19 research program.

20 “(c) RESEARCH PERMITS.—

21 “(1) IN GENERAL.—The Secretary shall carry
22 out the research program through the issuance of re-
23 search permits to participants in the research pro-
24 gram.

25 “(2) ENTITLEMENT.—For each research permit
26 that a participant in the research program receives

1 under the research program in a year of the re-
2 search program, the participant shall be entitled to
3 land 1 fish in the fishery described in subsection (a)
4 in that year.

5 “(3) INTENT TO USE.—The Secretary shall en-
6 sure that research permits are only issued under the
7 research program to participants in the research
8 program who intend to use the research permits to
9 gather data by fishing from the fishery described in
10 subsection (a).

11 “(4) NUMBER OF RESEARCH PERMITS
12 ISSUED.—The Secretary shall issue research permits
13 under the research program as follows:

14 “(A) During the first 2 years of the re-
15 search program, up to **[X]** research permits
16 per year.

17 “(B) During any subsequent 2-year period
18 of the research program, such number of re-
19 search permits as the South Atlantic Fishery
20 Management Council determines appropriate
21 using the best available science and with consid-
22 eration of the needs of other fishery manage-
23 ment plans.

24 “(5) ALLOCATION.—The Secretary shall allo-
25 cate the issuance of research permits to the fol-

1 lowing categories of persons in percentage distribu-
2 tions determined appropriate by the South Atlantic
3 Fishery Management Council for purposes of meet-
4 ing the data requirements of the research program:

5 “(A) Recreational.

6 “(B) Charter.

7 “(C) Commercial.

8 “(6) TRANSFERABILITY.—

9 “(A) IN GENERAL.—A person that receives
10 a research permit under the research program
11 may transfer the research permit to another
12 person participating in the research program.

13 “(B) NO CONSIDERATION.—A person that
14 transfers a research permit under the research
15 program may not receive consideration for that
16 transfer.

17 “(d) PARTICIPATION.—

18 “(1) VOLUNTARY.—Participation in the re-
19 search program shall be voluntary.

20 “(2) EXCLUSION FROM PARTICIPATION IN OPEN
21 SEASON.—A person that participates in the research
22 program in a year of the program may not partici-
23 pate in any fishery management plan in that year
24 that involves the imposition of limitations on periods

1 in which a fish can or cannot be fished from the
2 fishery described in subsection (a).

3 “(3) REPORT.—

4 “(A) IN GENERAL.—At the end of each
5 year of the research program, each person that
6 participated in the research program in that
7 year shall submit to the Secretary the weight
8 and length of each fish that was fished by the
9 person under the research program and date of
10 issue of the research permit that entitled the
11 person to capture that fish.

12 “(B) FAILURE TO REPORT.—A person sub-
13 ject to subparagraph (A) that fails to submit a
14 report under that subparagraph for a year may
15 not participate in the research program in any
16 subsequent year.

17 “(e) FEES.—

18 “(1) IN GENERAL.—Subject to paragraph (3),
19 the Secretary may collect a fee for each research
20 permit issued under the research program.

21 “(2) DISPOSITION OF FEES.—The Secretary
22 may use amounts collected under this subsection—

23 “(A) to administer the research program;
24 and

1 “(B) to determine and enhance the red
2 snapper biomass in the fisheries under the ju-
3 risdiction of the South Atlantic Fishery Man-
4 agement Council.

5 “(3) LIMITATION.—The Secretary shall ensure
6 that no more is collected under this subsection than
7 is necessary for the uses set forth in paragraph (2).

8 “(f) STATE AND LOCAL COOPERATION.—The Sec-
9 retary may enter into cooperative agreements with State
10 and local government agencies to assist the Secretary in
11 carrying out the research program.

12 “(g) BIENNIAL CONSIDERATION OF TERMINATION.—

13 “(1) CONSIDERATION.—Not less frequently
14 than once every 2 years, the Secretary shall assess
15 the research program using the best available
16 science and determine whether continuing the re-
17 search program would be advisable.

18 “(2) TERMINATION.—The Secretary shall ter-
19 minate the research program on the earlier of the
20 following:

21 “(A) The soonest practicable date after the
22 date on which the Secretary makes a deter-
23 mination under paragraph (1) that continuation
24 of the pilot program would not be advisable.

1 “(B) The date that is 6 years after the
2 date of the commencement of the research pro-
3 gram.”.

4 (b) CONFORMING AMENDMENTS.—The table of con-
5 tents in the Act is amended—

6 (1) by redesignating the item relating to section
7 308 as the item relating to 309; and

8 (2) by inserting after the item relating to sec-
9 tion 307 the following:

 “308. South Atlantic red snapper cooperative research program.”.

10 **SEC. 207. FOCUSING ASSETS FOR IMPROVED FISHERIES**
11 **OUTCOMES.**

12 (a) IN GENERAL.—Section 2(b) of the Act of August
13 11, 1939 (15 U.S.C. 713c-3(b)), is amended—

14 (1) in paragraph (1)—

15 (A) by striking “beginning with the fiscal
16 year commencing July 1, 1954, and ending on
17 June 30, 1957,”;

18 (B) by striking “moneys” the first place
19 that term appears and inserting “monies”; and

20 (C) by striking “shall be maintained in a
21 separate fund only for” and all that follows and
22 inserting “shall only be used for the purposes
23 described under subsection (c).”; and

24 (2) by striking paragraph (2).

1 (b) LIMITATIONS ON BILLS TRANSFERRING
2 FUNDS.—Section 2(b) of the Act of August 11, 1939 (15
3 U.S.C. 713c-3(b)), as amended by subsection (a) of this
4 section, is further amended by adding at the end the fol-
5 lowing:

6 “(2) LIMITATIONS ON BILLS TRANSFERRING
7 FUNDS.—

8 “(A) IN GENERAL.—It shall not be in
9 order in the Senate or the House of Represent-
10 atives to consider any bill, resolution, amend-
11 ment, or conference report that reduces any
12 amount in the fund referred to in paragraph
13 (1) in a manner that is inconsistent with such
14 paragraph.

15 “(B) LIMITATION ON CHANGES TO THIS
16 PARAGRAPH.—It shall not be in order in the
17 Senate or the House of Representatives to con-
18 sider any bill, resolution, amendment, or con-
19 ference report that would repeal or otherwise
20 amend this paragraph.

21 “(C) WAIVER.—A provision of this para-
22 graph may be waived or suspended in the Sen-
23 ate only by the affirmative vote of three-fifths
24 of the Members, duly chosen and sworn.

1 “(D) APPEALS.—An affirmative vote of
2 three-fifths of the Members of the Senate, duly
3 chosen and sworn, shall be required to sustain
4 an appeal of the ruling of the Chair on the
5 point of order raised under this paragraph.

6 “(E) RULES OF THE SENATE AND THE
7 HOUSE OF REPRESENTATIVES.—This para-
8 graph is enacted by Congress—

9 “(i) as an exercise of the rulemaking
10 power of the Senate and the House of Rep-
11 resentatives, respectively, and is deemed to
12 be part of the rules of each house, respec-
13 tively, but applicable only with respect to
14 the procedure to be followed in the House
15 in the case of a bill, resolution, amend-
16 ment, or conference report under this
17 paragraph, and it supersedes other rules
18 only to the extent that it is inconsistent
19 with such rules; and

20 “(ii) with full recognition of the con-
21 stitutional right of either House to change
22 the rules (so far as they relate to the pro-
23 cedure of that House) at any time, in the
24 same manner, and to the same extent as in
25 the case of any other rule of that House.”.

1 **TITLE III—REAUTHORIZATION**
2 **OF OTHER FISHERY STATUTES**

3 **SEC. 301. ANADROMOUS FISH CONSERVATION ACT.**

4 Section 4 of the Anadromous Fish Conservation Act
5 (16 U.S.C. 757d) is amended by striking “2007 through
6 2012” and inserting “2015 through 2021”.

7 **SEC. 302. INTERJURISDICTIONAL FISHERIES ACT OF 1986.**

8 Section 308 of the Interjurisdictional Fisheries Act
9 of 1986 (16 U.S.C. 4107) is amended—

10 (1) in subsection (a), by striking “\$5,000,000”
11 and all that follows through the end of that sub-
12 section and inserting “**[\$X,XXX,XXX]** for each of
13 fiscal years 2015 through 2021.”; and

14 (2) in subsection (c), by striking “\$900,000 for
15 each of fiscal years 2007 through 2012” and insert-
16 ing “**[\$X,XXX,XXX]** for each of fiscal years 2015
17 through 2021”.

18 **SEC. 303. ATLANTIC COASTAL FISHERIES COOPERATIVE**
19 **MANAGEMENT ACT.**

20 Section 811(a) of the Atlantic Coastal Fisheries Co-
21 operative Management Act (16 U.S.C. 5108(a)) is amend-
22 ed—

23 (1) by striking “\$10,000,000” and inserting
24 **["\$XX,XXX,XXX"]**; and

1 (2) by striking “2001 through 2005” and in-
2 serting “2015 through 2021”.

3 **SEC. 304. ATLANTIC STRIPED BASS CONSERVATION ACT.**

4 Section 7(a) of the Atlantic Striped Bass Conserva-
5 tion Act (16 U.S.C. 5156(a)) is amended by striking
6 “2007, 2008, 2009, 2010, 2011” and inserting “2015
7 through 2021”.

8 **SEC. 305. YUKON RIVER SALMON ACT OF 2000.**

9 Section 208 of the Yukon River Salmon Act of 2000
10 (16 U.S.C. 5727) is amended by striking “fiscal years
11 2007 through 2011” and inserting “fiscal years 2015
12 through 2021”.

13 **SEC. 306. STATE AUTHORITY FOR DUNGENESS CRAB FISH-**
14 **ERY MANAGEMENT.**

15 Section 203 of Public Law 105—384 (16 U.S.C.
16 1856 note) is amended—

17 (1) by striking subsection (i); and

18 (2) by redesignating subsection (j) as sub-
19 section (i).

20 **TITLE IV—INTERNATIONAL**

21 **SEC. 401. SECRETARIAL REPRESENTATIVE FOR INTER-**
22 **NATIONAL FISHERIES.**

23 (a) IN GENERAL.—Title II (16 U.S.C. 1821 et seq.)
24 is amended by inserting after section 202 the following:

1 **“SEC. 202A. SECRETARIAL REPRESENTATIVE FOR INTER-**
2 **NATIONAL FISHERIES.**

3 “(a) IN GENERAL.—The Secretary, in consultation
4 with the Under Secretary of Commerce for Oceans and
5 Atmosphere, shall designate a senior official who is ap-
6 pointed by the President, by and with the advice and con-
7 sent of the Senate, to serve as the Secretarial Representa-
8 tive for International Fisheries for the purpose of per-
9 forming the duties of the Secretary with respect to inter-
10 national agreements involving fisheries and other living
11 marine resources, including the development of policy and
12 representation of the United States as a Commissioner
13 under such international agreements.

14 “(b) ADVICE.—The Secretarial Representative for
15 International Fisheries shall, in consultation with the
16 Deputy Assistant Secretary for International Affairs and
17 the Administrator of the National Marine Fisheries Serv-
18 ice, advise the Secretary, Undersecretary of Commerce for
19 Oceans and Atmosphere, and other senior officials of the
20 Department of Commerce and the National Oceanic and
21 Atmospheric Administration on development of policy on
22 international fishery conservation and management mat-
23 ters.

24 “(c) CONSULTATION.—The Secretarial Representa-
25 tive for International Fisheries shall consult with the Com-
26 mittee on Natural Resources of the House of Representa-

1 tives and the Committee on Commerce, Science, and
2 Transportation of the Senate on matters pertaining to any
3 regional or international negotiation concerning living ma-
4 rine resources.”.

5 (b) REPEAL.—Section 408 of the Magnuson-Stevens
6 Fishery Conservation and Management Reauthorization
7 Act of 2006 (16 U.S.C. 1891d) and the item relating to
8 that section in the table of contents for that Act are re-
9 pealed.

10 (c) CONFORMING AMENDMENT.—The table of con-
11 tents in the first section of the Act (16 U.S.C. 1801 et
12 seq.) is amended by inserting after the item relating to
13 section 202 the following:

“Sec. 202A. Secretarial Representative for International Fisheries.”.

14 **SEC. 402. AMENDMENT TO PACIFIC SALMON TREATY ACT**
15 **OF 1985.**

16 Section 11 of the Pacific Salmon Treaty Act of 1985
17 (16 U.S.C. 3640) is amended—

18 (1) by redesignating subsections (c) and (d) as
19 subsections (d) and (e), respectively;

20 (2) by inserting after subsection (b) the fol-
21 lowing:

22 “(c) COMPENSATION OF COMMITTEE ON SCIENTIFIC
23 COOPERATION MEMBERS.—Members of the Committee on
24 Scientific Cooperation who are not State or Federal em-
25 ployees shall receive compensation at a rate equivalent to

1 the rate payable for level IV of the Executive Schedule
2 under section 5315 of title 5, United States Code, when
3 engaged in actual performance of duties for the Commis-
4 sion.”; and

5 (3) by striking “71” in subsection (e), as redes-
6 ignated, and inserting “171”.

7 **SEC. 403. REAUTHORIZATION OF ATLANTIC TUNAS CON-**
8 **VENTION ACT OF 1975.**

9 Section 10 of the Atlantic Tunas Convention Act of
10 1975 (16 U.S.C. 971h) is amended—

11 (1) in subsection (a)(1), by striking
12 “\$5,770,000 for each of fiscal years 2007 and
13 2008” and inserting “**[\$X,XXX,XXX]** for each of
14 fiscal years 2015 and 2016”;

15 (2) in subsection (a)(2), by striking
16 “\$6,058,000 for each of fiscal years 2009 and
17 2010” and inserting “**[\$X,XXX,XXX]** for each of
18 fiscal years 2017 and 2018”;

19 (3) in subsection (a)(3), by striking
20 “\$6,361,000 for each of fiscal years 2011 and
21 2013” and inserting “**[\$X,XXX,XXX]** for each of
22 fiscal years 2019, 2020, and 2021”;

23 (4) in subsection (b)(1), by striking “\$160,000”
24 and inserting “**[\$XXX,XXX]**”; and

1 (5) in subsection (b)(2), by striking
2 “\$7,500,000” and inserting [“\$X,XXX,XXX”].

3 **SEC. 404. REAUTHORIZATION OF SOUTH PACIFIC TUNA ACT**
4 **OF 1988.**

5 Section 20(a) of the South Pacific Tuna Act of 1988
6 (16 U.S.C. 973r(a)) is amended—

7 (1) in the text preceding paragraph (1)—

8 (A) by striking “for fiscal years 1992,
9 1993, 1994, 1995, 1996, 1997, 1998, 1999,
10 2000, 2001, and 2002”; and

11 (B) by striking “Act including—” and in-
12 serting “Act.”; and

13 (2) by striking paragraphs (1) and (2).

14 **SEC. 405. HIGH SEAS DRIFTNET FISHING MORATORIUM**
15 **PROTECTION ACT.**

16 (a) ILLEGAL, UNREPORTED, OR UNREGULATED
17 FISHING DEFINED.—Section 609(e) of the High Seas
18 Driftnet Fishing Moratorium Protection Act (16 U.S.C.
19 1826j(e)) is amended—

20 (1) by striking “Within 3 months after the date
21 of enactment of the Magnuson-Stevens Fishery Con-
22 servation and Management Reauthorization Act of
23 2006” and inserting “Not later than 3 months after
24 the date of enactment of the Magnuson-Stevens

1 Fishery Conservation and Management Reauthoriza-
2 tion Act of 2014” in paragraph (2);

3 (2) by striking “and” at the end of paragraph
4 (3)(B);

5 (3) in paragraph (3)(C), by striking “agree-
6 ment.” and inserting “agreement; and”; and

7 (4) by adding at the end the following:

8 “(D) to the extent possible—

9 “(i) fishing activities conducted by
10 foreign vessels in waters under the juris-
11 diction of a nation without permission of
12 that nation; and

13 “(ii) fishing activities conducted by
14 foreign vessels in contravention of a na-
15 tion’s laws, including fishing activity that
16 has not been reported or that has been
17 misreported to the relevant national au-
18 thority of a nation in contravention of that
19 nation’s laws.”.

20 (b) AUTHORIZATION OF APPROPRIATIONS; ILLEGAL,
21 UNREPORTED, OR UNREGULATED FISHING.—Section
22 609(f) of the High Seas Driftnet Fishing Moratorium Pro-
23 tection Act (16 U.S.C. 1826j(f)) is amended by striking
24 “2007 through 2013” and inserting “2015 through
25 2021”.

1 (c) AUTHORIZATION OF APPROPRIATIONS; EQUIVA-
2 LENT CONSERVATION MEASURES.—Section 610(f) of the
3 High Seas Driftnet Fishing Moratorium Protection Act
4 (16 U.S.C. 1826k) is amended by striking “2007 through
5 2013” and inserting “2015 through 2021”.

6 **SEC. 406. REAUTHORIZATION OF NORTHWEST ATLANTIC**
7 **FISHERIES CONVENTION ACT OF 1995.**

8 Section 211 of the Northwest Atlantic Fisheries Con-
9 vention Act of 1995 (16 U.S.C. 5610) is amended—

10 (1) by striking “\$500,000” and inserting
11 [“\$XXX,XXX”]; and

12 (2) by striking “2012” and inserting “2020”.

13 **TITLE V—MISCELLANEOUS**

14 **SEC. 501. TECHNICAL AMENDMENTS.**

15 (a) MAGNUSON-STEVENS FISHERY CONSERVATION
16 AND MANAGEMENT ACT.—

17 (1) Section 202(e)(5) (16 U.S.C. 1822(e)(5)) is
18 amended by striking “and it Annexes” and inserting
19 “and its Annexes”.

20 (2) Section 302 (16 U.S.C. 1852) is amended—

21 (A) in subsection (a)(1)(F) by striking
22 “Federally” and inserting “federally”;

23 (B) in subsection (b)(2)(C) by striking
24 “subsection (k)” and inserting “subsection (j)”;

1 (C) in subsection (b)(5)(A) by striking
2 “Federally” and inserting “federally”;

3 (D) in subsection (b)(6) by striking “para-
4 graphs” and inserting “paragraph”;

5 (E) in subsection (h)(5) by striking “ex-
6 cept as provided in section” and inserting “ex-
7 cept as provided in”; and

8 (F) in subsection (i)(3)(B) by striking
9 “subpararaph” and inserting “subparagraph”.

10 (3) Section 303 (16 U.S.C. 1853) is amended—

11 (A) in subsection (a)(5)—

12 (i) by striking “recreational,” and in-
13 serting “recreational, and”; and

14 (ii) by striking “processors,” and in-
15 serting “processors;”; and

16 (B) in subsection (b) by redesignating
17 paragraph (14) as paragraph (13).

18 (4) Section 303A(c)(4)(A)(v) (16 U.S.C.
19 1853a(c)(4)(A)(v)) is amended by striking “is” and
20 inserting “its”.

21 (5) Section 307(1)(K) (16 U.S.C. 1857(1)(K))
22 is amended by striking “to to steal” and inserting
23 “to steal”.

1 (6) Section 312(b)(2)(A) (16 U.S.C. 1861a) is
2 amended by striking “federal or state” and inserting
3 “Federal or State”.

4 (7) Section 313 (16 U.S.C. 1862) is amended—

5 (A) in subsection (a)(2), by striking “or
6 system” and inserting “or systems”; and

7 (B) in subsection (j)(9), by striking “sec-
8 tion 307(l)” and inserting “section 307(1)”.

9 (8) Section 314(a)(3) (16 U.S.C. 1863(a)(3)) is
10 amended by striking “subsection (1)” and inserting
11 “paragraph (1)”.

12 (9) Section 316(c) (16 U.S.C. 1865(c)) is
13 amended by striking “Interior” and inserting “the
14 Interior”.

15 (10) Section 401(c)(5) (16 U.S.C. 1881(c)(5))
16 is amended by striking “subsection” and inserting
17 “section”.

18 (11) Section 406(f)(1)(A) (16 U.S.C. 1882) is
19 amended by striking “federal, state” and inserting
20 “Federal, State”.

21 (b) MAGNUSON-STEVENSON FISHERY CONSERVATION
22 AND MANAGEMENT REAUTHORIZATION ACT OF 2006.—
23 Section 104 of the Magnuson-Stevens Fishery Conserva-
24 tion and Management Reauthorization Act of 2006 (120

1 Stat. 3584; 16 U.S.C. 1854 note) is amended by striking
2 subsection (d).

3 (c) HIGH SEAS DRIFTNET FISHING MORATORIUM
4 PROTECTION ACT.—Section 610(a)(1)(A) of the High
5 Seas Driftnet Fishing Moratorium Protection Act (16
6 U.S.C. 1826k(a)(1)(A)) is amended by striking “prac-
7 tices;” and inserting “practices—”.

8 (d) ANADROMOUS FISH CONSERVATION ACT.—Sec-
9 tion 2 of the Anadromous Fish Conservation Act (16
10 U.S.C. 757b) is amended in paragraph (5) by striking
11 “Seretary” and inserting “Secretary”.

12 (e) NORTHERN PACIFIC HALIBUT ACT OF 1982.—
13 The Northern Pacific Halibut Act of 1982 is amended—

14 (1) in section 9(a) (16 U.S.C. 773g(a)) by
15 striking “any” and inserting “an”; and

16 (2) in section 12 (16 U.S.C. 773j)—

17 (A) by redesignating subsections (a) and

18 (b) as paragraphs (1) and (2), respectively; and

19 (B) in paragraph (2), as redesignated, by
20 striking “section 262(b)” and inserting “section
21 262b”.

22 (f) GREAT LAKES FISHERY ACT OF 1956.—The
23 Great Lakes Fishery Act of 1956 is amended—

1 (1) in section 3(a)(1)(B) (16 U.S.C.
2 932(a)(1)(B)) by inserting “a” after “official of”;
3 and

4 (2) in section 8 (16 U.S.C. 937) by striking
5 “these provisions of title 28, U. S. C.,” and insert-
6 ing “those provisions of title 28, United States
7 Code,”.

8 (g) SOUTH PACIFIC TUNA ACT OF 1988.—Section
9 9(h) of the South Pacific Tuna Act of 1988 (16 U.S.C.
10 973g(h)) is amended—

11 (1) in paragraph (3), by striking “(16 U.S.C.
12 1374(h)(2) and 1416(a))—” and inserting “(16
13 U.S.C. 1374(h)(2) and 1416(a));”; and

14 (2) in the matter following paragraph (3), by
15 striking “treaty” and inserting “Treaty”.

16 (h) ANTARCTIC MARINE LIVING RESOURCES CON-
17 VENTION ACT OF 1984.—Section 303(1) of the Antarctic
18 Marine Living Resources Act of 1984 (16 U.S.C. 2432(1))
19 is amended by striking “60 degrees south; 50 degrees
20 west” and inserting “60 degrees south, 50 degrees west”.

21 (i) PACIFIC SALMON TREATY ACT OF 1985.—The
22 Pacific Salmon Treaty Act of 1985 (16 U.S.C. 3631 et
23 seq.) is amended—

1 (1) in section 3(a) (16 U.S.C. 3632(a)), by
2 striking “States of Oregon, or Washington” and in-
3 serting “State of Oregon or Washington”; and

4 (2) in section 3(h)(2) (16 U.S.C. 3632(h)(2))
5 by inserting a period after “under subsection (a)”.

6 (j) NORTH PACIFIC ANADROMOUS STOCKS ACT OF
7 1992.—The North Pacific Anadromous Stocks Act of
8 1992 (16 U.S.C. 5001 et seq.) is amended—

9 (1) in section 803(6) (16 U.S.C. 5002(6)) by
10 striking “North Latitude” and inserting “north lati-
11 tude”; and

12 (2) in section 809(d)(1)(B) (16 U.S.C.
13 5008(d)(1)(B), by striking “If any” and inserting
14 “if any”.

15 (k) NORTHWEST ATLANTIC FISHERIES CONVENTION
16 ACT OF 1995.—Section 210(5) of the Northwest Atlantic
17 Fisheries Convention Act of 1995 (16 U.S.C. 5609(5)) is
18 amended by striking “Article” and inserting “Articles”.

19 (l) YUKON RIVER SALMON ACT OF 1995.—The
20 Yukon River Salmon Act of 1995 (16 U.S.C. 5701 et seq.)
21 is amended.—

22 (1) in section 704(c), by striking “subsections
23 (b)(1) and (3)” and inserting “paragraphs (1) or (3)
24 of subsection (b)”;

1 (2) in section 709(c) (16 U.S.C. 5708(c)), by
2 striking “chapter 71” and inserting “chapter 171”;
3 and

4 (3) in section 710(2) (16 U.S.C. 5709(2)), by
5 striking “section 262(b)” and inserting “section
6 262b”.

7 (m) YUKON RIVER SALMON ACT OF 2000.—Section
8 206(c) of the Yukon River Salmon Act of 2000 (16 U.S.C.
9 5725(c)) is amended by striking “chapter 71” and insert-
10 ing “chapter 171”.

11 (n) WESTERN AND CENTRAL PACIFIC FISHERIES
12 CONVENTION IMPLEMENTATION ACT.—The Western and
13 Central Pacific Fisheries Convention Implementation Act
14 (16 U.S.C. 6901 et seq.) is amended.—

15 (1) in section 502(8) (16 U.S.C. 6901(8)), by
16 striking “Convention Area” and inserting “conven-
17 tion area”;

18 (2) in section 503 (16 U.S.C. 6902)—

19 (A) by striking “fashion.” in section
20 (d)(1)(C) and inserting “fashion,”; and

21 (B) by redesignating subsection (f) as sub-
22 section (e);

23 (3) in section 507(a)(7) (16 U.S.C.
24 6906(a)(7)), by striking “chapter” and inserting
25 “act”;

1 (4) in section 508 (16 U.S.C. 6907)—

2 (A) in subsection (a), by striking “United
3 States government” and inserting “United
4 States Government”;

5 (B) in subsection (e)(1)((B)(i)), by striking
6 “that” and inserting “than”;

7 (C) by striking “(e) APPLICATION OF REG-
8 ULATIONS—” and inserting “(e) APPLICATION
9 OF REGULATIONS.—”; and

10 (D) in subsection (e)(3), by striking “pur-
11 suant” and inserting “under”.

12 (o) PACIFIC WHITING ACT OF 2006.—Section
13 608(c)(4) of the Pacific Whiting Act of 2006 (16 U.S.C.
14 7007(c)(4)) is amended by striking “United State’s” and
15 inserting “United States’ ”.

113TH CONGRESS
2D SESSION

H. R. 4742

To amend the Magnuson-Stevens Fishery Conservation and Management Act to provide flexibility for fishery managers and stability for fishermen, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 23, 2014

Mr. HASTINGS of Washington introduced the following bill; which was referred to the Committee on Natural Resources

A BILL

To amend the Magnuson-Stevens Fishery Conservation and Management Act to provide flexibility for fishery managers and stability for fishermen, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Strengthening Fishing
5 Communities and Increasing Flexibility in Fisheries Man-
6 agement Act”.

7 **SEC. 2. TABLE OF CONTENTS.**

8 The table of contents for this Act is the following:

Sec. 1. Short title.

Sec. 2. Table of contents.

TITLE I—AMENDMENTS TO THE MAGNUSON-STEVENSON FISHERY
CONSERVATION AND MANAGEMENT ACT

- Sec. 101. Definitions.
- Sec. 102. References.
- Sec. 103. Flexibility in rebuilding fish stocks.
- Sec. 104. Modifications to the annual catch limit requirement.
- Sec. 105. Distinguishing between overfished and depleted.
- Sec. 106. Transparency and public process.
- Sec. 107. Limitation on future catch share programs.
- Sec. 108. Report on fee.
- Sec. 109. Data collection and data confidentiality.
- Sec. 110. Cooperative research and management program.
- Sec. 111. Council jurisdiction for overlapping fisheries.
- Sec. 112. Gulf of Mexico fisheries cooperative research and red snapper management.
- Sec. 113. North Pacific fishery management clarification.
- Sec. 114. Ensuring consistent management for fisheries throughout their range.
- Sec. 115. Limitation on harvest in North Pacific directed pollock fishery.
- Sec. 116. Authorization of appropriations.

TITLE II—REVITALIZING THE ECONOMY OF FISHERIES IN THE
PACIFIC

- Sec. 201. Short title.
- Sec. 202. Findings; purpose.
- Sec. 203. Refinancing of Pacific Coast groundfish fishing capacity reduction loan.

1 TITLE I—AMENDMENTS TO THE
2 MAGNUSON-STEVENSON FISHERY
3 CONSERVATION AND
4 MANAGEMENT ACT

5 SEC. 101. DEFINITIONS.

6 Any term used in this title that is defined in section
7 3 of the Magnuson-Stevens Fishery Conservation and
8 Management Act (16 U.S.C. 1802) shall have the same
9 meaning such term has under that section.

10 SEC. 102. REFERENCES.

11 Except as otherwise specifically provided, whenever in
12 this title an amendment or repeal is expressed in terms
13 of an amendment to, or repeal of, a provision, the ref-

1 erence shall be considered to be made to a provision of
2 the Magnuson-Stevens Fishery Conservation and Manage-
3 ment Act (16 U.S.C. 1801 et seq.).

4 **SEC. 103. FLEXIBILITY IN REBUILDING FISH STOCKS.**

5 (a) GENERAL REQUIREMENTS.—Section 304(e) (16
6 U.S.C. 1854(e)) is amended—

7 (1) in paragraph (4)—

8 (A) in subparagraph (A)(i), by striking
9 “possible” and inserting “practicable”;

10 (B) by amending subparagraph (A)(ii) to
11 read as follows:

12 “(ii) may not exceed the time the
13 stock would be rebuilt without fishing oc-
14 ccurring plus one mean generation, except
15 in a case in which—

16 “(I) the biology of the stock of
17 fish, other environmental conditions,
18 or management measures under an
19 international agreement in which the
20 United States participates dictate oth-
21 erwise;

22 “(II) the Secretary determines
23 that the cause of the stock being de-
24 pleted is outside the jurisdiction of the
25 Council or the rebuilding program

1 cannot be effective only by limiting
2 fishing activities;

3 “(III) the Secretary determines
4 that one or more components of a
5 mixed-stock fishery is depleted but
6 cannot be rebuilt within that time-
7 frame without significant economic
8 harm to the fishery, or cannot be re-
9 built without causing another compo-
10 nent of the mixed-stock fishery to ap-
11 proach a depleted status;

12 “(IV) the Secretary determines
13 that recruitment, distribution, or life
14 history of, or fishing activities for, the
15 stock are affected by informal trans-
16 boundary agreements under which
17 management activities outside the ex-
18 clusive economic zone by another
19 country may hinder conservation and
20 management efforts by United States
21 fishermen; and

22 “(V) the Secretary determines
23 that the stock has been affected by
24 unusual events that make rebuilding
25 within the specified time period im-

1 probable without significant economic
2 harm to fishing communities;”;

3 (C) by striking “and” after the semicolon
4 at the end of subparagraph (B), by redesign-
5 nating subparagraphs (B) and (C) as subpara-
6 graphs (C) and (D), and by inserting after sub-
7 paragraph (A) the following:

8 “(B) take into account environmental con-
9 dition including predator/prey relationships;”;
10 and

11 (D) by striking the period at the end of
12 subparagraph (D) (as so redesignated) and in-
13 serting “; and”, and by adding at the end the
14 following:

15 “(E) specify a schedule for reviewing the
16 rebuilding targets, evaluating environmental im-
17 pacts on rebuilding progress, and evaluating
18 progress being made toward reaching rebuilding
19 targets.”; and

20 (2) by adding at the end the following:

21 “(8) A fishery management plan, plan amend-
22 ment, or proposed regulations may use alternative
23 rebuilding strategies, including harvest control rules
24 and fishing mortality-rate targets to the extent they
25 are in compliance with the requirements of this Act.

1 “(9) A Council may terminate the application of
 2 paragraph (3) to a fishery if the Council’s scientific
 3 and statistical committee determines and the Sec-
 4 retary concurs that the original determination that
 5 the fishery was depleted was erroneous, either—

6 “(A) within the 2-year period beginning on
 7 the effective date a fishery management plan,
 8 plan amendment, or proposed regulation for a
 9 fishery under this subsection takes effect; or

10 “(B) within 90 days after the completion
 11 of the next stock assessment after such deter-
 12 mination.”.

13 (b) EMERGENCY REGULATIONS AND INTERIM MEAS-
 14 URES.—Section 305(c)(3)(B) (16 U.S.C. 1855(c)(3)(B))
 15 is amended by striking “180 days after” and all that fol-
 16 lows through “provided” and inserting “1 year after the
 17 date of publication, and may be extended by publication
 18 in the Federal Register for one additional period of not
 19 more than 1 year, if”.

20 **SEC. 104. MODIFICATIONS TO THE ANNUAL CATCH LIMIT**
 21 **REQUIREMENT.**

22 Section 302 (16 U.S.C. 1852) is amended by adding
 23 at the end the following:

24 “(m) CONSIDERATIONS FOR MODIFICATIONS TO AN-
 25 NUAL CATCH LIMIT REQUIREMENTS.—

1 “(1) CONSIDERATION OF ECOSYSTEM AND ECO-
2 NOMIC IMPACTS.—In establishing annual catch lim-
3 its a Council may, consistent with section 302(h)(6),
4 consider changes in an ecosystem and the economic
5 needs of the fishing communities.

6 “(2) LIMITATIONS TO ANNUAL CATCH LIMIT
7 REQUIREMENT FOR SPECIAL FISHERIES.—Notwith-
8 standing subsection (h)(6), a Council is not required
9 to develop an annual catch limit for—

10 “(A) an ecosystem component species;

11 “(B) a fishery for a species that has a life
12 cycle of approximately 1 year, unless the Sec-
13 retary has determined the fishery is subject to
14 overfishing; or

15 “(C) a stock for which—

16 “(i) more than half of a single-year
17 class will complete their life cycle in less
18 than 18 months; and

19 “(ii) fishing mortality will have little
20 impact on the stock.

21 “(3) RELATIONSHIP TO INTERNATIONAL FISH-
22 ERY EFFORTS.—Each annual catch limit may, con-
23 sistent with section 302(h)(6), take into account—

1 “(A) management measures under inter-
 2 national agreements in which the United States
 3 participates; and

4 “(B) informal transboundary agreements
 5 under which fishery management activities by
 6 another country outside the exclusive economic
 7 zone may hinder conservation efforts by United
 8 States fishermen for a fish species for which
 9 any of the recruitment, distribution, life history,
 10 or fishing activities are transboundary.

11 “(4) AUTHORIZATION FOR MULTISPECIES COM-
 12 PLEXES AND MULTIYEAR ANNUAL CATCH LIMITS.—
 13 For purposes of subsection (h)(6), a Council may es-
 14 tablish—

15 “(A) an annual catch limit for a stock
 16 complex; or

17 “(B) annual catch limits for each year in
 18 any continuous period that is not more than
 19 three years in duration.

20 “(5) ECOSYSTEM COMPONENT SPECIES DE-
 21 FINED.—In this subsection the term ‘ecosystem com-
 22 ponent species’ means a stock of fish that is a non-
 23 target, incidentally harvested stock of fish in a fish-
 24 ery, or a nontarget, incidentally harvested stock of

1 fish that a Council or the Secretary has deter-
 2 mined—

3 “(A) is not subject to overfishing, ap-
 4 proaching a depleted condition or depleted; and

5 “(B) is not likely to become subject to
 6 overfishing or depleted in the absence of con-
 7 servation and management measures.”.

8 **SEC. 105. DISTINGUISHING BETWEEN OVERFISHED AND DE-**
 9 **PLETED.**

10 (a) DEFINITIONS.—Section 3 (16 U.S.C. 1802) is
 11 amended—

12 (1) in paragraph (34), by striking “and ‘over-
 13 fished’ mean” and inserting “means”; and

14 (2) by inserting after paragraph (8) the fol-
 15 lowing:

16 “(8a) The term ‘depleted’ means, with respect
 17 to a stock of fish or stock complex, that the stock
 18 or stock complex has a biomass that has declined
 19 below a level that jeopardizes the capacity of the
 20 stock or stock complex to produce maximum sustain-
 21 able yield on a continuing basis.”.

22 (b) SUBSTITUTION OF TERM.—The Magnuson-Ste-
 23 vens Fishery Conservation and Management Act (16
 24 U.S.C. 1801 et seq.) is amended by striking “overfished”
 25 each place it appears and inserting “depleted”.

1 (c) CLARITY IN ANNUAL REPORT.—Section
 2 304(e)(1) (16 U.S.C. 1854(e)(1)) is amended by adding
 3 at the end the following: “The report shall distinguish be-
 4 tween fisheries that are depleted (or approaching that con-
 5 dition) as a result of fishing and fisheries that are depleted
 6 (or approaching that condition) as a result of factors other
 7 than fishing. The report shall state, for each fishery iden-
 8 tified as depleted or approaching that condition, whether
 9 the fishery is the target of directed fishing.”.

10 **SEC. 106. TRANSPARENCY AND PUBLIC PROCESS.**

11 (a) ADVICE.—Section 302(g)(1)(B) (16 U.S.C.
 12 1852(g)(1)(B)) is amended by adding at the end the fol-
 13 lowing: “Each scientific and statistical committee shall de-
 14 velop such advice in a transparent manner and allow for
 15 public involvement in the process.”.

16 (b) MEETINGS.—Section 302(i)(2) (16 U.S.C.
 17 1852(i)(2)) is amended by adding at the end the following:

18 “(G) Each Council shall make available on the
 19 Internet Web site of the Council—

20 “(i) to the extent practicable, a Webcast,
 21 an audio recording, or a live broadcast of each
 22 meeting of the Council, and of the Council Co-
 23 ordination Committee established under sub-
 24 section (l), that is not closed in accordance with
 25 paragraph (3); and

1 “(ii) audio, video (if the meeting was in
2 person or by video conference), or a searchable
3 audio or written transcript of each meeting of
4 the Council and of the meetings of committees
5 referred to in section 302(g)(1)(B) of the Coun-
6 cil by not later than 30 days after the conclu-
7 sion of the meeting.

8 “(H) The Secretary shall maintain and make
9 available to the public an archive of Council and sci-
10 entific and statistical committee meeting audios, vid-
11 eos, and transcripts made available under clauses (i)
12 and (ii) subparagraph (G).”.

13 (c) FISHERY IMPACT STATEMENTS.—

14 (1) REQUIREMENT.—Section 303 (16 U.S.C.
15 1853) is amended—

16 (A) in subsection (a), by striking para-
17 graph (9) and redesignating paragraphs (10)
18 through (15) as paragraphs (9) through (14),
19 respectively; and

20 (B) by adding at the end the following:

21 “(d) FISHERY IMPACT STATEMENT.—

22 “(1) Any fishery management plan (or fishery
23 management plan amendment) prepared by any
24 Council or by the Secretary pursuant to subsection
25 (a) or (b), or proposed regulations deemed necessary

1 pursuant to subsection (c), shall include a fishery
2 impact statement which shall assess, specify and
3 analyze the likely effects and impact of the proposed
4 action on the quality of the human environment.

5 “(2) The fishery impact statement shall de-
6 scribe—

7 “(A) a purpose of the proposed action;

8 “(B) the environmental impact of the pro-
9 posed action;

10 “(C) any adverse environmental effects
11 which cannot be avoided should the proposed
12 action be implemented;

13 “(D) a reasonable range of alternatives to
14 the proposed action;

15 “(E) the relationship between short-term
16 use of fishery resources and the enhancement of
17 long-term productivity;

18 “(F) the cumulative conservation and man-
19 agement effects; and

20 “(G) economic, and social impacts of the
21 proposed action on—

22 “(i) participants in the fisheries and
23 fishing communities affected by the pro-
24 posed action;

1 “(ii) participants in the fisheries con-
2 ducted in adjacent areas under the author-
3 ity of another Council, after consultation
4 with such Council and representatives of
5 those participants; and

6 “(iii) the safety of human life at sea,
7 including whether and to what extent such
8 measures may affect the safety of partici-
9 pants in the fishery.

10 “(3) A substantially complete fishery impact
11 statement, which may be in draft form, shall be
12 available not less than 14 days before the beginning
13 of the meeting at which a Council makes its final de-
14 cision on the proposal (for plans, plan amendments,
15 or proposed regulations prepared by a Council pur-
16 suant to subsection (a) or (c)). Availability of this
17 fishery impact statement will be announced by the
18 methods used by the council to disseminate public
19 information and the public and relevant government
20 agencies will be invited to comment on the fishery
21 impact statement.

22 “(4) The completed fishery impact statement
23 shall accompany the transmittal of a fishery man-
24 agement plan or plan amendment as specified in sec-

1 tion 304(a), as well as the transmittal of proposed
2 regulations as specified in section 304(b).

3 “(5) The Councils shall, subject to approval by
4 the Secretary, establish criteria to determine actions
5 or classes of action of minor significance regarding
6 subparagraphs (A), (B), (D), (E), and (F) of para-
7 graph (2), for which preparation of a fishery impact
8 statement is unnecessary and categorically excluded
9 from the requirements of this section, and the docu-
10 mentation required to establish the exclusion.

11 “(6) The Councils shall, subject to approval by
12 the Secretary, prepare procedures for compliance
13 with this section that provide for timely, clear, and
14 concise analysis that is useful to decisionmakers and
15 the public, reduce extraneous paperwork and effec-
16 tively involve the public, including—

17 “(A) using Council meetings to determine
18 the scope of issues to be addressed and identi-
19 fying significant issues related to the proposed
20 action;

21 “(B) integration of the fishery impact
22 statement development process with preliminary
23 and final Council decisionmaking in a manner
24 that provides opportunity for comment from the

1 public and relevant government agencies prior
2 to these decision points; and

3 “(C) providing scientific, technical, and
4 legal advice at an early stage of the develop-
5 ment of the fishery impact statement to ensure
6 timely transmittal and Secretarial review of the
7 proposed fishery management plan, plan
8 amendment, or regulations to the Secretary.

9 “(7) Actions taken in accordance with the pro-
10 cedures of this section shall constitute fulfillment of
11 the requirements the National Environmental Policy
12 Improvement Act of 1970 (42 U.S.C. 4371 et seq.)
13 and all related implementing regulations.”.

14 (2) EVALUATION OF ADEQUACY.—Section
15 304(a)(2) (16 U.S.C. 1854(a)(2)) is amended by
16 striking “and” after the semicolon at the end of sub-
17 paragraph (B), striking the period at the end of sub-
18 paragraph (C) and inserting “; and”, and by adding
19 at the end the following:

20 “(D) evaluate the adequacy of the accom-
21 panying fishery impact statement as basis for
22 fully considering the environmental impacts of
23 implementing the fishery management plan or
24 plan amendment.”.

1 (3) REVIEW OF REGULATIONS.—Section 304(b)
2 (16 U.S.C. 1854(b)) is amended by striking so much
3 as precedes subparagraph (A) of paragraph (1) and
4 inserting the following:

5 “(b) REVIEW OF REGULATIONS.—

6 “(1) Upon transmittal by the Council to the
7 Secretary of proposed regulations prepared under
8 section 303(c), the Secretary shall immediately ini-
9 tiate an evaluation of the proposed regulations to de-
10 termine whether they are consistent with the fishery
11 management plan, plan amendment, this Act and
12 other applicable law. The Secretary shall also imme-
13 diately initiate an evaluation of the accompanying
14 fishery impact statement as a basis for fully consid-
15 ering the environmental impacts of implementing the
16 proposed regulations. Within 15 days of initiating
17 such evaluation the Secretary shall make a deter-
18 mination and—”.

19 (4) EFFECT ON TIME REQUIREMENTS.—Section
20 305(e) (16 U.S.C. 1855(e)) is amended by inserting
21 “the National Environmental Policy Act of 1969 (42
22 U.S.C. 4321 et seq.),” after “the Regulatory Flexi-
23 bility Act (5 U.S.C. 601 et seq.)”.

1 **SEC. 107. LIMITATION ON FUTURE CATCH SHARE PRO-**
2 **GRAMS.**

3 (a) CATCH SHARE DEFINED.—Section 3 (16 U.S.C.
4 1802) is amended by inserting after paragraph (2) the fol-
5 lowing:

6 “(2a) The term ‘catch share’ means any fishery
7 management program that allocates a specific per-
8 centage of the total allowable catch for a fishery, or
9 a specific fishing area, to an individual, cooperative,
10 community, processor, representative of a commer-
11 cial sector, or regional fishery association established
12 in accordance with section 303A(c)(4), or other enti-
13 ty.”.

14 (b) CATCH SHARE REFERENDUM PILOT PRO-
15 GRAM.—

16 (1) IN GENERAL.—Section 303A(c)(6)(D) (16
17 U.S.C. 1853a(c)(6)(D)) is amended to read as fol-
18 lows:

19 “(D) CATCH SHARE REFERENDUM PILOT
20 PROGRAM.—

21 “(i) The New England, Mid-Atlantic,
22 South Atlantic, and Gulf of Mexico Coun-
23 cils may not submit a fishery management
24 plan or amendment that creates a catch
25 share program for a fishery, and the Sec-
26 retary may not approve or implement such

1 a plan or amendment submitted by such a
2 Council or a secretarial plan or amendment
3 under section 304(c) that creates such a
4 program, unless the final program has
5 been approved, in a referendum in accord-
6 ance with this subparagraph, by a majority
7 of the permit holders eligible to participate
8 in the fishery. For multispecies permits in
9 the Gulf of Mexico, any permit holder with
10 landings from within the sector of the fish-
11 ery being considered for the catch share
12 program within the 5-year period pre-
13 ceding the date of the referendum and still
14 active in fishing in the fishery shall be eli-
15 gible to participate in such a referendum.
16 If a catch share program is not approved
17 by the requisite number of permit holders,
18 it may be revised and submitted for ap-
19 proval in a subsequent referendum.

20 “(ii) The Secretary may, at the re-
21 quest of the New England Fishery Man-
22 agement Council, allow participation in
23 such a referendum for a fishery under the
24 Council’s authority, by fishing vessel crew-

1 members who derive a significant portion
2 of their livelihood from such fishing.

3 “(iii) The Secretary shall conduct a
4 referendum under this subparagraph, in-
5 cluding notifying all permit holders eligible
6 to participate in the referendum and mak-
7 ing available to them—

8 “(I) a copy of the proposed pro-
9 gram;

10 “(II) an estimate of the costs of
11 the program, including costs to par-
12 ticipants;

13 “(III) an estimate of the amount
14 of fish or percentage of quota each
15 permit holder would be allocated; and

16 “(IV) information concerning the
17 schedule, procedures, and eligibility
18 requirements for the referendum proc-
19 ess.

20 “(iv) For the purposes of this sub-
21 paragraph, the term ‘permit holder eligible
22 to participate’ only includes the holder of
23 a permit for a fishery under which fishing
24 has occurred in 3 of the 5 years preceding
25 a referendum for the fishery, unless sick-

1 ness, injury, or other unavoidable hardship
2 prevented the permit holder from engaging
3 in such fishing.

4 “(v) The Secretary may not imple-
5 ment any catch share program for any
6 fishery managed exclusively by the Sec-
7 retary unless first petitioned by a majority
8 of those permit holders eligible to partici-
9 pate in the fishery.”.

10 (2) LIMITATION ON APPLICATION.—The amend-
11 ment made by paragraph (1) shall not apply to a
12 catch share program that is submitted to, or pro-
13 posed by, the Secretary of Commerce before the date
14 of enactment of this Act.

15 (3) REGULATIONS.—Before conducting a ref-
16 erendum under the amendment made by paragraph
17 (1), the Secretary of Commerce shall issue regula-
18 tions implementing such amendment after providing
19 an opportunity for submission by the public of com-
20 ments on the regulations.

21 **SEC. 108. REPORT ON FEE.**

22 Section 304(d)(2) (16 U.S.C. 1854(d)(2)) is amended
23 by adding at the end the following:

24 “(D) The Secretary shall report annually
25 on the amount collected under this paragraph

1 from each fishery and detail how the funds were
2 spent in the prior year on a fishery-by-fishery
3 basis, to—

4 “(i) Congress; and

5 “(ii) each Council from whose fish-
6 eries the fee under this paragraph were
7 collected.”.

8 **SEC. 109. DATA COLLECTION AND DATA CONFIDENTIALITY.**

9 (a) **ELECTRONIC MONITORING.—**

10 (1) **ISSUANCE OF REGULATIONS.—**

11 (A) **REQUIREMENT.—**The Secretary shall
12 issue regulations governing the use of electronic
13 monitoring for the purposes of monitoring fish-
14 eries that are subject to the Magnuson-Stevens
15 Fishery Conservation and Management Act (16
16 U.S.C. 1801 et seq.).

17 (B) **CONTENT.—**The regulations shall—

18 (i) distinguish between monitoring for
19 data collection and research purposes and
20 monitoring for compliance and enforcement
21 purposes; and

22 (ii) include minimum criteria, objec-
23 tives, or performance standards for elec-
24 tronic monitoring.

1 (C) PROCESS.—In issuing the regulations
2 the Secretary shall—

3 (i) consult with the Councils and fish-
4 ery management commissions;

5 (ii) publish the proposed regulations;
6 and

7 (iii) provide an opportunity for the
8 submission by the public of comments on
9 the proposed regulations.

10 (2) IMPLEMENTATION OF MONITORING.—

11 (A) IN GENERAL.—Subject to subpara-
12 graph (B), and after the issuance of the final
13 regulations, a Council, or the Secretary for fish-
14 eries referred to in section 302(a)(3) of the
15 Magnuson-Stevens Fishery Conservation and
16 Management Act (16 U.S.C. 1852(a)(3)), may,
17 in accordance with the regulations, on a fishery-
18 by-fishery basis and consistent with the existing
19 objectives and management goals of a fishery
20 management plan and the Act for a fishery
21 issued by the Council or the Secretary, respec-
22 tively, amend such plan—

23 (i) to incorporate electronic moni-
24 toring as an alternative tool for data col-
25 lection and monitoring purposes or for

1 compliance and enforcement purposes (or
2 both); and

3 (ii) to allow for the replacement of a
4 percentage of on-board observers with elec-
5 tronic monitoring.

6 (B) COMPARABILITY.—Subparagraph (A)
7 shall apply to a fishery only if the Council or
8 Secretary, respectively, determines that such
9 monitoring will yield comparable data collection
10 and compliance results.

11 (3) PILOT PROJECTS.—Before the issuance of
12 final regulations, a Council, or the Secretary for
13 fisheries referred to in section 302(a)(3), may, sub-
14 ject to the requirements of the Magnuson-Stevens
15 Fishery Conservation and Management Act, on a
16 fishery-by-fishery basis, and consistent with the ex-
17 isting objectives and management goals of a fishery
18 management plan for a fishery issued by the Council
19 or the Secretary, respectively, conduct a pilot project
20 for the use of electronic monitoring for the fishery.

21 (4) DEADLINE.—The Secretary shall issue final
22 regulations under this subsection by not later than
23 12 months after the date of enactment of this Act.

24 (b) VIDEO AND ACOUSTIC SURVEY TECH-
25 NOLOGIES.—The Secretary shall work with the Regional

1 Fishery Management Councils and nongovernmental enti-
2 ties to develop and implement the use pursuant to the
3 Magnuson-Stevens Fishery Conservation and Manage-
4 ment Act (16 U.S.C. 1801 et seq.) of video survey tech-
5 nologies and expanded use of acoustic survey technologies.

6 (c) CONFIDENTIALITY OF INFORMATION.—

7 (1) IN GENERAL.—Section 402(b) (16 U.S.C.
8 1881a(b)) is amended—

9 (A) in paragraph (1)—

10 (i) by amending subparagraph (B) to
11 read as follows:

12 “(B) to State or Marine Fisheries Commis-
13 sion employees as necessary for achievement of
14 the purposes of this Act, subject to a confiden-
15 tiality agreement between the State or Commis-
16 sion, respectively, and the Secretary that pro-
17 hibits public disclosure of the identity of any
18 person and of confidential information;”;

19 (ii) in subparagraph (E), by striking
20 “limited access” and inserting “catch
21 share”; and

22 (iii) in subparagraph (G), by striking
23 “limited access” and inserting “catch
24 share”;

25 (B) in paragraph (2)—

1 (i) in the matter preceding subpara-
2 graph (A), by inserting “, and information
3 obtained through a vessel monitoring sys-
4 tem or other technology used onboard a
5 fishing vessel for enforcement or data col-
6 lection purposes,” after “information;”;

7 (ii) by striking “or” after the semi-
8 colon at the end of subparagraph (B); and

9 (iii) by striking subparagraph (C) and
10 inserting the following:

11 “(C) as authorized by any regulations
12 issued under paragraph (6) allowing the collec-
13 tion of observer information, pursuant to a con-
14 fidentiality agreement between the observers,
15 observer employers, and the Secretary prohib-
16 iting disclosure of the information by the ob-
17 servers or observer employers, in order—

18 “(i) to allow the sharing of observer
19 information among observers and between
20 observers and observer employers as nec-
21 essary to train and prepare observers for
22 deployments on specific vessels; or

23 “(ii) to validate the accuracy of the
24 observer information collected; or

1 “(D) to other persons if the Secretary has
2 obtained written authorization from the person
3 who submitted such information or from the
4 person on whose vessel the information was col-
5 lected, to release such information for reasons
6 not otherwise provided for in this subsection.”;

7 (C) by redesignating and moving para-
8 graph (3) to be paragraph (6); and

9 (D) by striking paragraphs (4) and (5)
10 and inserting the following:

11 “(3) Any information submitted to the Sec-
12 retary, a State fisheries management agency, or a
13 Marine Fisheries Commission by any person in com-
14 pliance with the requirements of this Act, including
15 confidential information, may only be used for pur-
16 poses of fisheries management and monitoring and
17 enforcement under this Act.

18 “(4) The Secretary may enter into a memo-
19 randum of understanding with the heads of other
20 Federal agencies for the sharing of confidential in-
21 formation to ensure safety of life at sea or for fish-
22 eries enforcement purposes, including information
23 obtained through a vessel monitoring system or
24 other electronic enforcement and monitoring sys-
25 tems, if—

1 “(A) the Secretary determines there is a
2 compelling need to do so; and

3 “(B) the heads of the other Federal agen-
4 cies agree—

5 “(i) to maintain the confidentiality of
6 the information in accordance with the re-
7 quirements that apply to the Secretary
8 under this section; and

9 “(ii) to use the information only for
10 the purposes for which it was shared with
11 the agencies.

12 “(5) The Secretary may not provide any vessel-
13 specific or aggregate vessel information from a fish-
14 ery that is collected for monitoring and enforcement
15 purposes to any person for the purposes of coastal
16 and marine spatial planning under Executive Order
17 13547, unless the Secretary has obtained written au-
18 thorization to release such information from the per-
19 son on whose vessel the information was collected.”.

20 (2) CONFIDENTIAL INFORMATION DEFINED.—
21 Section 3 (16 U.S.C. 1802) is further amended by
22 inserting after paragraph (4) the following:

23 “(4a) The term ‘confidential information’
24 means—

25 “(A) trade secrets;

1 “(B) proprietary information;

2 “(C) observer information; and

3 “(D) commercial or financial information
4 the disclosure of which is likely to result in
5 harm to the competitive position of the person
6 that submitted the information to the Sec-
7 retary.”.

8 (d) INCREASED DATA COLLECTION AND ACTIONS TO
9 ADDRESS DATA-POOR FISHERIES.—Section 404 (16
10 U.S.C. 1881c) is amended by adding at the end the fol-
11 lowing:

12 “(e) USE OF THE ASSET FORFEITURE FUND FOR
13 FISHERY INDEPENDENT DATA COLLECTION.—

14 “(1) IN GENERAL.—

15 “(A) The Secretary, subject to appropria-
16 tions, may obligate for data collection purposes
17 in accordance with prioritizations under para-
18 graph (3) a portion of amounts received by the
19 United States as fisheries enforcement pen-
20 alties.

21 “(B) Amounts may be obligated under this
22 paragraph only in the fishery management re-
23 gion with respect to which they are collected.

24 “(2) INCLUDED PURPOSES.—The purposes re-
25 ferred to in paragraph (1) include—

1 “(A) the use of State personnel and re-
2 sources, including fishery survey vessels owned
3 and maintained by States to survey or assess
4 data-poor fisheries for which fishery manage-
5 ment plans are in effect under this Act; and

6 “(B) cooperative research activities author-
7 ized under section 318 to improve or enhance
8 the fishery independent data used in fishery
9 stock assessments.

10 “(3) DATA-POOR FISHERIES PRIORITY LISTS.—

11 Each Council shall—

12 “(A) identify those fisheries in its region
13 considered to be data-poor fisheries;

14 “(B) prioritize those fisheries based on the
15 need of each fishery for up-to-date information;
16 and

17 “(C) provide those priorities to the Sec-
18 retary.

19 “(4) DEFINITIONS.—In this subsection:

20 “(A) The term ‘data-poor fishery’ means a
21 fishery—

22 “(i) that has not been surveyed in the
23 preceding 5-year period;

1 “(ii) for which a fishery stock assess-
 2 ment has not been performed within the
 3 preceding 5-year period; or

4 “(iii) for which limited information on
 5 the status of the fishery is available for
 6 management purposes.

7 “(B) The term ‘fisheries enforcement pen-
 8 alties’ means any fine or penalty imposed, or
 9 proceeds of any property seized, for a violation
 10 of this Act or of any other marine resource law
 11 enforced by the Secretary.

12 “(5) AUTHORIZATION OF APPROPRIATIONS.—
 13 There is authorized to be appropriated to the Sec-
 14 retary for each fiscal year to carry out this sub-
 15 section up to 80 percent of the fisheries enforcement
 16 penalties collected during the preceding fiscal year.”.

17 **SEC. 110. COOPERATIVE RESEARCH AND MANAGEMENT**
 18 **PROGRAM.**

19 Section 318 (16 U.S.C. 1867) is amended—

20 (1) in subsection (a), by inserting “(1)” before
 21 the first sentence, and by adding at the end the fol-
 22 lowing:

23 “(2) Within one year after the date of enactment of
 24 the Strengthening Fishing Communities and Increasing
 25 Flexibility in Fisheries Management Act, and after con-

1 sultation with the Councils, the Secretary shall publish a
2 plan for implementing and conducting the program estab-
3 lished in paragraph (1). Such plan shall identify and de-
4 scribe critical regional fishery management and research
5 needs, possible projects that may address those needs, and
6 estimated costs for such projects. The plan shall be revised
7 and updated every 5 years, and updated plans shall in-
8 clude a brief description of projects that were funded in
9 the prior 5-year period and the research and management
10 needs that were addressed by those projects.”; and

11 (2) in subsection (c)—

12 (A) in the heading, by striking “FUNDING”
13 and inserting “PRIORITIES”; and

14 (B) in paragraph (1), by striking all after
15 “including” and inserting an em dash, followed
16 on the next line by the following:

17 “(A) the use of fishing vessels or acoustic
18 or other marine technology;

19 “(B) expanding the use of electronic catch
20 reporting programs and technology; and

21 “(C) improving monitoring and observer
22 coverage through the expanded use of electronic
23 monitoring devices.”.

1 **SEC. 111. COUNCIL JURISDICTION FOR OVERLAPPING**
2 **FISHERIES.**

3 Section 302(a)(1) (16 U.S.C. 1852(a)) is amended—

4 (1) in subparagraph (A), in the second sen-
5 tence—

6 (A) by striking “18” and inserting “19”;

7 and

8 (B) by inserting before the period at the
9 end “and a liaison who is a member of the Mid-
10 Atlantic Fishery Management Council to rep-
11 resent the interests of fisheries under the juris-
12 diction of such Council”; and

13 (2) in subparagraph (B), in the second sen-
14 tence—

15 (A) by striking “21” and inserting “22”;

16 and

17 (B) by inserting before the period at the
18 end “and a liaison who is a member of the New
19 England Fishery Management Council to rep-
20 resent the interests of fisheries under the juris-
21 diction of such Council”.

22 **SEC. 112. GULF OF MEXICO FISHERIES COOPERATIVE RE-**
23 **SEARCH AND RED SNAPPER MANAGEMENT.**

24 (a) REPEAL.—Section 407 (16 U.S.C. 1883), and the
25 item relating to such section in the table of contents in
26 the first section, are repealed.

1 (b) REPORTING AND DATA COLLECTION PRO-
2 GRAM.—The Secretary of Commerce shall—

3 (1) in conjunction with the States, the Gulf of
4 Mexico Fishery Management Council, and the rec-
5 reational fishing sectors, develop and implement a
6 real-time reporting and data collection program for
7 the Gulf of Mexico red snapper fishery using avail-
8 able technology; and

9 (2) make implementation of this subsection a
10 priority for funds received by the Secretary and allo-
11 cated to this region under section 2 of the Act of
12 August 11, 1939 (commonly known as the
13 “Saltonstall-Kennedy Act”) (15 U.S.C. 713c–3).

14 (c) FISHERIES COOPERATIVE RESEARCH PRO-
15 GRAM.—The Secretary of Commerce—

16 (1) shall, in conjunction with the States, the
17 Gulf States Marine Fisheries Commission and the
18 Atlantic States Marine Fisheries Commission, the
19 Gulf of Mexico and South Atlantic Fishery Manage-
20 ment Councils, and the commercial, charter, and
21 recreational fishing sectors, develop and implement a
22 cooperative research program authorized under sec-
23 tion 318 for the fisheries of the Gulf of Mexico and
24 South Atlantic regions, giving priority to those fish-
25 eries that are considered data-poor; and

1 (2) may, subject to the availability of appropria-
2 tions, use funds received by the Secretary under sec-
3 tion 2 of the Act of August 11, 1939 (commonly
4 known as the “Saltonstall-Kennedy Act”) (15 U.S.C.
5 713c-3) to implement this subsection.

6 (d) STOCK SURVEYS AND STOCK ASSESSMENTS.—
7 The Secretary of Commerce, acting through the National
8 Marine Fisheries Service Regional Administrator of the
9 Southeast Regional Office, shall for purposes of the Mag-
10 nuson-Stevens Fishery Conservation and Management Act
11 (16 U.S.C. 1801 et seq.)—

12 (1) develop a schedule of stock surveys and
13 stock assessments for the Gulf of Mexico Region and
14 the South Atlantic Region for the 5-year period be-
15 ginning on the date of the enactment of this Act and
16 for every 5-year period thereafter;

17 (2) direct the Southeast Science Center Direc-
18 tor to implement such schedule; and

19 (3) in such development and implementation—

20 (A) give priority to those stocks that are
21 commercially or recreationally important; and

22 (B) ensure that each such important stock
23 is surveyed at least every 5 years.

24 (e) USE OF FISHERIES INFORMATION IN STOCK AS-
25 SESSMENTS.—The Southeast Science Center Director

1 shall ensure that fisheries information made available
2 through fisheries programs funded under Public Law
3 112–141 is incorporated as soon as possible into any fish-
4 eries stock assessments conducted after the date of the
5 enactment of this Act.

6 (f) STATE FISHERIES MANAGEMENT IN THE GULF
7 OF MEXICO WITH RESPECT TO RED SNAPPER.—Section
8 306(b) (16 U.S.C. 1856(b)) is amended by adding at the
9 end the following:

10 “(3) Notwithstanding section 3(11), for the purposes
11 of managing the recreational sector of the Gulf of Mexico
12 red snapper fishery, the seaward boundary of a coastal
13 State in the Gulf of Mexico is a line 9 miles seaward from
14 the baseline from which the territorial sea of the United
15 States is measured.”.

16 **SEC. 113. NORTH PACIFIC FISHERY MANAGEMENT CLARI-**
17 **FICATION.**

18 Section 306(a)(3)(C) (16 U.S.C. 1856(a)(3)(C)) is
19 amended—

20 (1) by striking “was no” and inserting “is no”;

21 and

22 (2) by striking “on August 1, 1996”.

1 **SEC. 114. ENSURING CONSISTENT MANAGEMENT FOR FISH-**
 2 **ERIES THROUGHOUT THEIR RANGE.**

3 (a) IN GENERAL.—The Magnuson-Stevens Fishery
 4 Conservation and Management Act (16 U.S.C. 1801 et
 5 seq.) is amended by inserting after section 4 the following:

6 **“SEC. 5. ENSURING CONSISTENT FISHERIES MANAGEMENT**
 7 **UNDER CERTAIN OTHER FEDERAL LAWS.**

8 “(a) NATIONAL MARINE SANCTUARIES ACT AND AN-
 9 TIQUITIES ACT OF 1906.—In any case of a conflict be-
 10 tween this Act and the National Marine Sanctuaries Act
 11 (16 U.S.C. 1431 et seq.) or the Antiquities Act of 1906
 12 (16 U.S.C. 431 et seq.), this Act shall control.

13 “(b) FISHERIES RESTRICTIONS UNDER ENDAN-
 14 GERED SPECIES ACT OF 1973.—To ensure transparency
 15 and consistent management of fisheries throughout their
 16 range, any restriction on the management of fish in the
 17 exclusive economic zone that is necessary to implement a
 18 recovery plan under the Endangered Species Act of 1973
 19 (16 U.S.C. 1531 et seq.) shall be implemented—

20 “(1) using authority under this Act; and

21 “(2) in accordance with processes and time
 22 schedules required under this Act.”.

23 (b) CLERICAL AMENDMENT.—The table of contents
 24 in the first section is amended by inserting after the item
 25 relating to section 4 the following:

“Sec. 5. Ensuring consistent fisheries management under other Federal laws.”.

1 **SEC. 115. LIMITATION ON HARVEST IN NORTH PACIFIC DI-**
2 **RECTED POLLOCK FISHERY.**

3 Section 210(e)(1) of the American Fisheries Act (title
4 II of division C of Public Law 105–277; 16 U.S.C. 1851
5 note) is amended to read as follows:

6 “(1) HARVESTING.—

7 “(A) LIMITATION.—No particular indi-
8 vidual, corporation, or other entity may harvest,
9 through a fishery cooperative or otherwise, a
10 percentage of the pollock available to be har-
11 vested in the directed pollock fishery that ex-
12 ceeds the percentage established for purposes of
13 this paragraph by the North Pacific Council.

14 “(B) MAXIMUM PERCENTAGE.—The per-
15 centage established by the North Pacific Coun-
16 cil shall not exceed 24 percent of the pollock
17 available to be harvested in the directed Pollock
18 fishery.”.

19 **SEC. 116. AUTHORIZATION OF APPROPRIATIONS.**

20 Section 4 (16 U.S.C. 1803) is amended—

21 (1) by striking “this Act” and all that follows
22 through “(7)” and inserting “this Act”; and

23 (2) by striking “fiscal year 2013” and inserting
24 “each of fiscal years 2014 through 2018”.

1 **TITLE II—REVITALIZING THE**
2 **ECONOMY OF FISHERIES IN**
3 **THE PACIFIC**

4 **SEC. 201. SHORT TITLE.**

5 This title may be cited as the “Revitalizing the Econ-
6 omy of Fisheries in the Pacific Act” or the “REFI Pacific
7 Act”.

8 **SEC. 202. FINDINGS; PURPOSE.**

9 (a) FINDINGS.—Congress makes the following find-
10 ings:

11 (1) In 2000, the Secretary of Commerce de-
12 clared the West Coast groundfish fishery a Federal
13 fisheries economic disaster due to low stock abun-
14 dance, an overcapitalized fleet, and historically over-
15 fished stocks.

16 (2) Section 212 of the Department of Com-
17 merce and Related Agencies Appropriations Act,
18 2003 (title II of division B of Public Law 108–7;
19 117 Stat. 80) was enacted to establish a Pacific
20 Coast groundfish fishing capacity reduction pro-
21 gram, also known as a buyback program, to remove
22 excess fishing capacity.

23 (3) In 2003, Congress authorized the
24 \$35,700,000 buyback loan, creating the Pacific
25 Coast groundfish fishing capacity reduction program

1 through the National Marine Fisheries Service fish-
2 eries finance program with a term of 30 years. The
3 interest rate of the buyback loan was fixed at 6.97
4 percent and is paid back based on an ex-vessel fee
5 landing rate not to exceed 5 percent for the loan.

6 (4) The groundfish fishing capacity reduction
7 program resulted in the removal of limited entry
8 trawl Federal fishing permits from the fishery, rep-
9 resenting approximately 46 percent of total landings
10 at the time.

11 (5) Because of an absence of a repayment
12 mechanism, \$4,243,730 in interest accrued before
13 fee collection procedures were established in 2005,
14 over 18 months after the groundfish fishing capacity
15 reduction program was initiated.

16 (6) In 2011, the West Coast groundfish fishery
17 transitioned to an individual fishing quota fishery,
18 which is a type of catch share program.

19 (7) By 2015, West Coast groundfish fisher-
20 men's expenses are expected to include fees of ap-
21 proximately \$450 per day for observers, a 3-percent
22 cost recovery fee as authorized by the Magnuson-
23 Stevens Fishery Conservation and Management Act
24 (16 U.S.C. 1801) for catch share programs, and a
25 5-percent ex-vessel landings rate for the loan repay-

1 ment, which could reach 18 percent of their total
2 gross revenue.

3 (8) In 2012, the West Coast groundfish limited
4 entry trawl fishery generated \$63,000,000, an in-
5 crease from an average of \$45,000,000 during the
6 years 2006 to 2011. This revenue is expected to con-
7 tinue to increase post-rationalization.

8 (b) PURPOSE.—The purpose of this title is to refi-
9 nance the Pacific Coast groundfish fishery fishing capacity
10 reduction program to protect and conserve the West Coast
11 groundfish fishery and the coastal economies in California,
12 Oregon, and Washington that rely on it.

13 **SEC. 203. REFINANCING OF PACIFIC COAST GROUND FISH**
14 **FISHING CAPACITY REDUCTION LOAN.**

15 (a) IN GENERAL.—The Secretary of Commerce, upon
16 receipt of such assurances as the Secretary considers ap-
17 propriate to protect the interests of the United States,
18 shall issue a loan to refinance the existing debt obligation
19 funding the fishing capacity reduction program for the
20 West Coast groundfish fishery implemented under section
21 212 of the Department of Commerce and Related Agen-
22 cies Appropriations Act, 2003 (title II of division B of
23 Public Law 108–7; 117 Stat. 80).

24 (b) APPLICABLE LAW.—Except as otherwise provided
25 in this section, the Secretary shall issue the loan under

1 this section in accordance with subsections (b) through (e)
2 of section 312 of the Magnuson-Stevens Fishery Conserva-
3 tion and Management Act (16 U.S.C. 1861a) and sections
4 53702 and 53735 of title 46, United States Code.

5 (c) LOAN TERM.—

6 (1) IN GENERAL.—Notwithstanding section
7 53735(c)(4) of title 46, United States Code, a loan
8 under this section shall have a maturity that expires
9 at the end of the 45-year period beginning on the
10 date of issuance of the loan.

11 (2) EXTENSION.—Notwithstanding paragraph
12 (1) and if there is an outstanding balance on the
13 loan after the period described in paragraph (1), a
14 loan under this section shall have a maturity of 45
15 years or until the loan is repaid in full.

16 (d) LIMITATION ON FEE AMOUNT.—Notwithstanding
17 section 312(d)(2)(B) of the Magnuson-Stevens Fishery
18 Conservation and Management Act (16 U.S.C.
19 1861a(d)(2)(B)), the fee established by the Secretary with
20 respect to a loan under this section shall not exceed 3 per-
21 cent of the ex-vessel value of the harvest from each fishery
22 for where the loan is issued.

23 (e) INTEREST RATE.—

24 (1) IN GENERAL.—Notwithstanding section
25 53702(b)(2) of title 46, United States Code, the an-

1 nual rate of interest an obligor shall pay on a direct
2 loan obligation under this section is the percent the
3 Secretary must pay as interest to borrow from the
4 Treasury the funds to make the loan.

5 (2) SUBLOANS.—Each subloan under the loan
6 authorized by this section—

7 (A) shall receive the interest rate described
8 in paragraph (1); and

9 (B) may be paid off at any time notwith-
10 standing subsection (c)(1).

11 (f) EX-VESSEL LANDING FEE.—

12 (1) CALCULATIONS AND ACCURACY.—The Sec-
13 retary shall set the ex-vessel landing fee to be col-
14 lected for payment of the loan under this section—

15 (A) as low as possible, based on recent
16 landings value in the fishery, to meet the re-
17 quirements of loan repayment;

18 (B) upon issuance of the loan in accord-
19 ance with paragraph (2); and

20 (C) on a regular interval not to exceed
21 every 5 years beginning on the date of issuance
22 of the loan.

23 (2) DEADLINE FOR INITIAL EX-VESSEL LAND-
24 INGS FEE CALCULATION.—Not later than 60 days
25 after the date of issuance of the loan under this sec-

1 tion, the Secretary shall recalculate the ex-vessel
2 landing fee based on the most recent value of the
3 fishery.

4 (g) AUTHORIZATION.—There is authorized to be ap-
5 propriated to the Secretary of Commerce to carry out this
6 section an amount equal to 1 percent of the amount of
7 the loan authorized under this section for purposes of the
8 Federal Credit Reform Act of 1990 (2 U.S.C. 661 et seq.).

○

WORKING DRAFT

STAFF ANALYSIS OF MSA REAUTHORIZATION LEGISLATION

MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT

Public Law 94-265

**As amended by the Magnuson-Stevens Fishery Conservation and
Management Reauthorization Act (P.L. 109-479)**

AN ACT

**To provide for the conservation and management of the fisheries, and for
other purposes.**

**Highlights changes made in HR 4742 (Hastings/House bill) in red text; includes
amendments made during House Committee on Natural Resources markup
on May 29, 2014**

Highlights changes made in the Begich/Senate discussion draft in blue text

Contents

SEC. 2.	FINDINGS, PURPOSES, AND POLICY	5
SEC. 3.	DEFINITIONS.....	8
SEC. 4.	AUTHORIZATION OF APPROPRIATIONS.....	15
SEC. 5.	ENSURING CONSISTENT FISHERIES MANAGEMENT UNDER OTHER FEDERAL LAWS	15

TITLE I—UNITED STATES RIGHTS AND AUTHORITY REGARDING FISH AND FISHERY RESOURCES

SEC. 101.	UNITED STATES SOVEREIGN RIGHTS TO FISH AND FISHERY MANAGEMENT AU- THORITY.....	16
SEC. 102.	HIGHLY MIGRATORY SPECIES.....	16
SEC. ____.	PROHIBITION ON CONSIDERING RED SNAPPER KILLED DURING REMOVAL OF OIL RIGS.	16

TITLE II—FOREIGN FISHING AND INTERNATIONAL FISHERY AGREEMENTS

SEC. 201.	FOREIGN FISHING	17
SEC. 202.	INTERNATIONAL FISHERY AGREEMENTS	23
SEC. 202A.	SECRETARIAL REPRESENTATIVE FOR INTERNATIONAL FISHERIES	25
SEC. 203.	CONGRESSIONAL OVERSIGHT OF 16 U.S.C. 1823 INTERNATIONAL FISHERY AGREE- MENTS	26
SEC. 204.	PERMITS FOR FOREIGN FISHING	27
SEC. 205.	IMPORT PROHIBITIONS	33
SEC. 206.	LARGE-SCALE DRIFTNET FISHING.....	34

HIGH SEAS DRIFTNET FISHERIES ENFORCEMENT ACT

SEC. 101.3	DENIAL OF PORT PRIVILEGES AND SANCTIONS FOR HIGH SEAS LARGE-SCALE DRIFTNET FISHING	37
SEC. 102.4	DURATION OF DENIAL OF PORT PRIVILEGES AND SANCTIONS	38
SEC. 104.	DEFINITIONS.....	38

HIGH SEAS DRIFTNET FISHING MORATORIUM PROTECTION ACT

SEC. 603.	PROHIBITION	39
SEC. 604.	NEGOTIATIONS	39
SEC. 605.	CERTIFICATION	39
SEC. 606.	ENFORCEMENT	39
SEC. 607.	BIENNIAL REPORT ON INTERNATIONAL COMPLIANCE	39
SEC. 608.	ACTION TO STRENGTHEN INTERNATIONAL FISHERY MANAGEMENT ORGANIZATIONS.....	40
SEC. 609.	ILLEGAL, UNREPORTED, OR UNREGULATED FISHING.....	41
SEC. 610.	EQUIVALENT CONSERVATION MEASURES.....	43
SEC. 207.	INTERNATIONAL MONITORING AND COMPLIANCE.....	45

TITLE III—NATIONAL FISHERY MANAGEMENT PROGRAM NATIONAL STANDARDS FOR FISHERY CONSERVATION AND MANAGEMENT

SEC.301. NATIONAL STANDARDS FOR FISHERY CONSERVATION AND MANAGEMENT	47
SEC. 302. REGIONAL FISHERY MANAGEMENT COUNCILS	48
SEC. 303. CONTENTS OF FISHERY MANAGEMENT PLANS	61
SEC. 303A. LIMITED ACCESS PRIVILEGE PROGRAMS.....	67
SEC. 303B. FISHERY ECOSYSTEM PLANNING AUTHORITY	74
SEC. 304. ACTION BY THE SECRETARY	76
SEC. 305. OTHER REQUIREMENTS AND AUTHORITY	86
SEC. 306. STATE JURISDICTION	98
SEC. 307. PROHIBITED ACTS	101
SEC. 308. CIVIL PENALTIES AND PERMIT SANCTIONS	104
SEC. 309. CRIMINAL OFFENSES.....	106
SEC. 310. CIVIL FORFEITURES.....	106
SEC. 311. ENFORCEMENT	107
SEC. 313. NORTH PACIFIC FISHERIES CONSERVATION.....	116
SEC. 314. NORTHWEST ATLANTIC OCEAN FISHERIES REINVESTMENT PROGRAM	120
SEC. 315. REGIONAL COASTAL DISASTER ASSISTANCE, TRANSITION, AND RECOVERY PROGRAM	121
SEC. 317. SHARK FEEDING.....	124
SEC. 318. COOPERATIVE RESEARCH AND MANAGEMENT PROGRAM.....	124
SEC. 319. HERRING STUDY	125
SEC. 320. RESTORATION STUDY.....	126

TITLE IV—FISHERY MONITORING AND RESEARCH

SEC. 401. REGISTRATION AND INFORMATION MANAGEMENT	127
SEC. 402. INFORMATION COLLECTION.....	130
SEC. 403. OBSERVERS - 16 U.S.C. 1881b	134
SEC. 404. FISHERIES RESEARCH.....	134
SEC. 405. INCIDENTAL HARVEST RESEARCH	138
SEC. 406. FISHERIES SYSTEMS RESEARCH.....	139
SEC. 407. GULF OF MEXICO RED SNAPPER RESEARCH.....	140
SEC. 408. SOUTH ATLANTIC RED SNAPPER COOPERATIVE RESEARCH PROGRAM.....	141
SEC. 408. 409. DEEP-SEA CORAL RESEARCH AND TECHNOLOGY PROGRAM - 16 U.S.C. 1884 ..	141
SEC. 409. STOCK ASSESSMENTS USED FOR FISHERIES MANAGED UNDER GULF OF MEXICO COUNCIL'S REEF FISH MANAGEMENT PLAN.....	142

Appendix

INVESTMENT IN UNITED STATES SEAFOOD PROCESSING FACILITIES.	143
COMMUNITY-BASED RESTORATION PROGRAM FOR FISHERY AND COASTAL HABITATS. ...	143
FISHERIES CONSERVATION AND MANAGEMENT FUND.	143
UNITED STATES CATCH HISTORY.	144
SECRETARIAL REPRESENTATIVE FOR INTERNATIONAL FISHERIES.	144
REPORT (uncodified)	145
SALMON PLAN AND STUDY.....	145

OREGON AND CALIFORNIA SALMON FISHERY	146
FISHERY FINANCE PROGRAM HURRICANE ASSISTANCE.	146
CLARIFICATION OF FLEXIBILITY.....	147
CONVERSION TO CATCHER/PROCESSOR SHARES.....	147
IMPACT OF TURTLE EXCLUDER DEVICES ON SHRIMPING.....	149
HURRICANE EFFECTS ON COMMERCIAL AND RECREATION FISHERY HABITATS.....	149
NEW ENGLAND GROUND FISH FISHERY	150
REPORT ON COUNCIL MANAGEMENT COORDINATION	150
STUDY OF SHORTAGE IN THE NUMBER OF INDIVIDUALS WITH POST- BACCALAUREATE DEGREES IN SUBJECTS RELATED TO FISHERY SCIENCE	151
PACIFIC FISHERY MANAGEMENT COUNCIL	151
STUDY OF THE ACIDIFICATION OF THE OCEANS AND EFFECT ON FISHERIES.....	152

OTHER GENERAL CHANGES

HASTINGS CHANGES	152
SEC. 8. DATA COLLECTION AND DATA CONFIDENTIALITY.	152
REPORTING AND DATA COLLECTION PROGRAM.	153
FISHERIES COOPERATIVE RESEARCH PROGRAM.	153
STOCK SURVEYS AND STOCK ASSESSMENTS.	153
USE OF FISHERIES INFORMATION IN STOCK ASSESSMENTS.	154
LIMITATION ON HARVEST IN NORTH PACIFIC DIRECTED POLLOCK FISHERY.....	154
REVITALIZING THE ECONOMY OF FISHERIES IN THE PACIFIC ACT.....	154
FINDINGS; PURPOSE.....	154
REFINANCING OF PACIFIC COAST GROUND FISH FISHING CAPACITY REDUCTION LOAN...	155
BEGICH CHANGES	156
TECHNICAL AND CONFORMING AMENDMENTS.—	156
FISHERY MANAGEMENT PLAN AMENDMENTS.—	157
SUMMER FLOUNDER MANAGEMENT. (MAFMC ONLY).....	157
STUDY OF ALLOCATIONS IN MIXED-USE FISHERIES.	158
ELECTRONIC MONITORING.....	158
COST REDUCTION REPORT.	159
CAPITAL CONSTRUCTION.	159
PROMOTION OF THE FREE FLOW OF DOMESTICALLY PRODUCED FISHERY PRODUCTS....	159

SEC. 2. FINDINGS, PURPOSES, AND POLICY

(a) FINDINGS.—The Congress finds and declares the following:

- (1) The fish off the coasts of the United States, the highly migratory species of the high seas, the species which dwell on or in the Continental Shelf appertaining to the United States, and the anadromous species which spawn in United States rivers or estuaries, constitute valuable and renewable natural resources. These fishery resources contribute to the food supply, economy, and health of the Nation and provide recreational opportunities.
- (2) Certain stocks of fish have declined to the point where their survival is threatened, and other stocks of fish have been so substantially reduced in number that they could become similarly threatened as a consequence of (A) increased fishing pressure, (B) the inadequacy of fishery resource conservation and management practices and controls, or (C) ~~direct and indirect habitat losses which have resulted in a diminished capacity to support existing fishing levels~~. Natural and human-caused effects on ecosystems, including direct and indirect habitat losses, bycatch mortality, and trophic impacts that have changed the physical, chemical, and ecological processes that support marine ecosystems and [have] resulted in a diminished capacity to support existing fishing levels¹
- (3) Commercial and recreational fishing constitutes a major source of employment and contributes significantly to the economy of the Nation. Many coastal areas are dependent upon fishing and related activities, and their economies have been badly damaged by the overfishing of fishery resources at ~~an ever-increasing rate over the past decade~~². The activities of massive foreign fishing fleets in waters adjacent to such coastal areas have contributed to such damage, interfered with domestic fishing efforts, and caused destruction of the fishing gear of United States fishermen.

[New (4)] Subsistence fishing is an integral part of life in many communities throughout the United States, and the Nation's marine and anadromous fish are important sources of nutrition, subsistence, and the cultural heritage of those communities.³

- (4) [Change to paragraph 5] International fishery agreements have not been effective in preventing or terminating the overfishing of these valuable fishery resources. There is danger that irreversible effects from overfishing will take place before an effective international agreement on fishery management jurisdiction can be negotiated, signed, ratified, and implemented.
- (5) [Change to paragraph 6] Fishery resources are finite but renewable. If placed under sound management before overfishing has caused irreversible effects, the fisheries can be conserved and maintained so as to provide optimum yields on a continuing basis.
- (6) [Change to paragraph 7] A national program for the conservation and management of the fishery resources of the United States is necessary to prevent overfishing, to rebuild ~~overfished depleted~~⁴ stocks, to insure conservation, to facilitate long-term protection of essential fish habitats and marine ecosystems

1 Begich page 3 lines 13-22 (more specific definition now includes indirect reference to ocean acidification, climate change)

2 Begich page 3 lines 23-24

3 Begich page 5 line 24 - page 6 line 3 (Begich adds references to subsistence and tribal government throughout. This is response to comments that MSA as currently written does not adequately consider tribal and subsistence issues, or stress the importance of consultation with tribal governments.)

4 HR 4742 page 9 line 22-25 (HR 4742 changes "overfished" to "depleted" throughout)

tems⁵, and to realize the full potential of the Nation's fishery resources.

[New (8)] By establishing mechanisms, under authority of this Act, for specifying science-based annual catch limits in fishery management plans at levels such that overfishing does not occur in fisheries, including measures to ensure accountability, the Nation's fishery resources are now being managed sustainably to prevent overfishing and respond quickly if overfishing occurs.⁶

[New (9)] It is of critical importance to the health of the Nation's fishery resources and the coastal communities that depend on them that the United States maintain its progress in preventing overfishing and rebuilding overfished stocks.⁷

(8) [Change to paragraph 10] A national program for the development of fisheries which are underutilized or not utilized by the United States fishing industry, including bottom fish off Alaska, is necessary to assure that our citizens benefit from the employment, food supply, and revenue which could be generated thereby.

[New (11)] Forage species are a fundamental component of marine ecosystems, highly vulnerable to natural population fluctuations and fishing pressure, and are subject to increasing fishing pressure. In most regions of the country there are few, if any, constraints on the rapid development of new fisheries for forage fish, and the management approaches for the currently developed fisheries for forage fish often put the ecological role of these critically important species at risk.⁸

(8) [change to paragraph 12] The collection of reliable data is essential to the effective conservation, management, and scientific understanding of the fishery resources of the United States.

(10) [Change to paragraph 13] One of the greatest long-term threats to the viability of commercial and recreational fisheries is the continuing loss of marine, estuarine, and other aquatic habitats. Habitat considerations should receive increased attention for the conservation and management of fishery resources of the United States. Fisheries management is most effective when it incorporates information provided by governmental and nongovernmental sources, including State and Federal agency staff, fishermen, fishing communities, universities, research institutions, and other appropriate entities. As appropriate, that information should be considered the best scientific information available and form the basis of conservation and management measures as required by this Act.⁹

(11) [Change to paragraph 14] Pacific Insular Areas contain unique historical, cultural, legal, political, and geographical circumstances which make fisheries resources important in sustaining their economic growth.

(12) [Change to paragraph 15] A number of the Fishery Management Councils ~~have demonstrated~~ are demonstrating¹⁰ significant progress in integrating ecosystem considerations in fisheries management using the existing authorities provided under this Act.

[New (16)] Bycatch of living marine resources in United States marine fisheries can have profound population, ecosystem, and socioeconomic effects on United States fishery resources and the communities that depend on those fishery resources¹¹

(13) [Change to paragraph 17] International cooperation is necessary to address illegal, unreported, and unregulated fishing and other fishing practices which may harm the sustainability of living marine

5 Begich page 4 line 1-2 (Begich strengthens ecosystem management provisions throughout)

6 Begich page 5 lines 7-14 (refers to successes from last authorization of the MSA)

7 Begich page 5 lines 15-19

8 Begich page 4 line 18 - page 5 line 2 (emphasis on forage fish is new; PFMC already addressing this)

9 Begich page 65 lines 2-14 (intends to incorporate more information from fishermen, cooperative research)

10 Begich page 4 lines 3-4

11 Begich page 4 lines 9-13 (new emphasis on effects of bycatch)

resources and disadvantage the United States fishing industry.

(b) PURPOSES.—It is therefore declared to be the purposes of the Congress in this Act—

- (1) to take immediate action to conserve and manage the fishery resources found off the coasts of the United States, and the anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species and Continental Shelf fishery resources[, and fishery resources in the special areas]¹²;
- (2) to support and encourage the implementation and enforcement of international fishery agreements for the conservation and management of highly migratory species, and to encourage the negotiation and implementation of additional such agreements as necessary;
- (3) to promote domestic commercial and recreational recreational and subsistence¹³ fishing under sound conservation and management principles, including the promotion of catch and release programs in recreational fishing;
- (4) to provide for the preparation and implementation, in accordance with national standards, of fishery management plans which will achieve and maintain, on a continuing basis, the optimum yield from each fishery;

[New 5] to provide for the adoption of ecosystem-based fishery management goals and policies that promote ecosystem health, stability, and sustainability, and the conservation and management of fishery resources¹⁴

- (5) [change to paragraph 6] to establish Regional Fishery Management Councils to exercise sound judgment in the stewardship of fishery resources through the preparation, monitoring, and revision of such plans under circumstances (A) which will enable the States, tribal governments¹⁵, the fishing industry, consumer and environmental organizations, and other interested persons to participate in, and advise on, the establishment and administration of such plans, and (B) which take into account the social and economic needs of the States;
- (6) [change to paragraph 7] to encourage the development by the United States fishing industry of fisheries which are currently underutilized or not utilized by United States fishermen, including bottom fish off Alaska, and to that end, to ensure that optimum yield determinations promote such development in a non-wasteful manner; and
- (7) [change to paragraph 8] to promote the protection of essential fish habitat in the review of projects projects and activities¹⁶ conducted under Federal permits, licenses, or other authorities that affect or have the potential to affect such habitat.

(c) POLICY.—It is further declared to be the policy of the Congress in this Act—

- (1) to maintain without change the existing territorial or other ocean jurisdiction of the United States for all purposes other than the conservation and management of fishery resources, as provided for in this Act;
- (2) to authorize no impediment to, or interference with, recognized legitimate uses of the high seas, except as necessary for the conservation and management of fishery resources, as provided for in this Act;

12 Begich page 6 line 6. This was in brackets in original MSA.

13 Begich page 6 line 9-10

14 Begich page 6 line 20-24. New emphasis on ecosystem-based management

15 Begich page 6 line 13. New emphasis on tribal governments

16 Begich page 6 line 14-15. Implications unclear.

- (4) to assure that the national fishery conservation and management program utilizes, and is based upon, the best scientific information available; involves, and is responsive to the needs of, interested and affected States, **tribes**, and citizens; considers efficiency; draws upon Federal, State, **tribal**, and academic capabilities in carrying out research, administration, management, and enforcement; considers the effects of fishing on immature fish and encourages development of practical measures **to avoid bycatch, minimize mortality of bycatch that cannot be avoided, that minimize bycatch**¹⁷ and avoid unnecessary waste of fish; and is workable and effective.
- (5) to permit foreign fishing consistent with the provisions of this Act;
- (6) to support and encourage active United States efforts to obtain internationally acceptable agreements which provide for effective conservation and management of fishery resources, and to secure agreements to regulate fishing by vessels or persons beyond the exclusive economic zones of any nation;
- (7) to foster and maintain the diversity of fisheries in the United States; and
- (8) to ensure that the fishery resources adjacent to a Pacific Insular Area, including resident or migratory stocks within the exclusive economic zone adjacent to such areas, be explored, developed, conserved, and managed for the benefit of the people of such area and of the United States.

SEC. 3. DEFINITIONS

16 U.S.C. 1802

As used in this Act, unless the context otherwise requires—

- (1) The term “anadromous species” means species of fish which spawn in fresh or estuarine waters of the United States and which migrate to ocean waters.
- (2) The term “bycatch” ~~means fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program.~~
 - (A) means fish that are harvested in a fishery and discarded, including economic discards and regulatory discards, fish that are harvested in a fishery and retained but not landed, non-target fish that are harvested in a fishery and retained, or fish that are subject to mortality due to a direct encounter with fishing gear; and
 - (B) does not include fish released alive under a recreational catch and release fishery management program.¹⁸
- (2a) The term ‘catch share’ means any fishery management program that allocates a specific percentage of the total allowable catch for a fishery, or a specific fishing area, to an individual, cooperative, community, processor, representative of a commercial sector, or regional fishery association established in accordance with section 303A(c)(4), or other entity.¹⁹
- (3) The term “charter fishing” means fishing from a vessel carrying a passenger for hire (as defined in section 2101(21a) of title 46, United States Code) who is engaged in recreational fishing.
- (4) The term “commercial fishing” means fishing in which the fish harvested, either in whole or in part, are intended to enter commerce or enter commerce through sale, barter or trade.

(4a) The term ‘confidential information’ means—

17 Begich page 7 lines 6-11. Reflects the importance of avoiding bycatch, as well as minimizing it where it cannot be avoided.

18 Begich page 7-8 lines 17-3. Defines bycatch more precisely to include certain categories of fish that are not target fish.

19 HR 4742 page 17 lines 3-13

- (A) trade secrets;
 - (B) proprietary information;
 - (C) observer information; and
 - (D) commercial or financial information the disclosure of which is likely to result in harm to the competitive position of the person that submitted the information to the Secretary.²⁰
- (5) The term “conservation and management” refers to all of the rules, regulations, conditions, methods, and other measures
- (A) which are required to rebuild, restore, or maintain, and which are useful in rebuilding, restoring, or maintaining, any fishery resource and the marine environment; and
 - (B) which are designed to assure that—
 - (i) a supply of food and other products may be taken, and that recreational benefits may be obtained, on a continuing basis;
 - (ii) irreversible or long-term adverse effects on fishery resources and the marine environment are avoided; and
 - (iii) there will be a multiplicity of options available with respect to future uses of these resources.
- (6) The term “Continental Shelf” means the seabed and subsoil of the submarine areas adjacent to the coast, but outside the area of the territorial sea, of the United States, to a depth of 200 meters or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of such areas.
- (7) The term “Continental Shelf fishery resources” means the following:

CNIDARIA

Bamboo Coral—*Acanella* spp.; Black Coral—*Antipathes* spp.; Gold Coral—*Callogorgia* spp.;

Precious Red Coral—*Corallium* spp.; Bamboo Coral—*Keratoisis* spp.; and Gold Coral—*Parazoanthus* spp.

CRUSTACEA

Tanner Crab—*Chionoecetes tanneri*; Tanner Crab—*Chionoecetes opilio*; Tanner Crab—*Chionoecetes angulatus*; Tanner Crab—*Chionoecetes bairdi*; King Crab—*Paralithodes camtschatica*; King Crab—*Paralithodes platypus*; King Crab—*Paralithodes brevipes*;

Lobster—*Homarus americanus*; Dungeness Crab—*Cancer magister*;

California King Crab—*Paralithodes californiensis*; California King Crab—*Paralithodes rathbuni*; Golden King Crab—*Lithodes aequispinus*; Northern Stone Crab—*Lithodes maja*;

Stone Crab—*Menippe mercenaria*; and Deep-sea Red Crab—*Chaceon quinque-dens*.

MOLLUSKS

Red Abalone—*Haliotis rufescens*; Pink Abalone—*Haliotis corrugata*;

Japanese Abalone—*Haliotis kamtschatkana*; Queen Conch—*Strombus gigas*;

Surf Clam—*Spisula solidissima*; and Ocean Quahog—*Arctica islandica*.

SPONGES

Glove Sponge—*Spongia cheiris*; Sheepswool Sponge—*Hippiospongia lachne*; Grass Sponge—*Spongia graminea*; and Yellow Sponge—*Spongia barbera*.

20 HR 4742 page 27 line 20- page 28. “Observer information” is added since discussion draft.

If the Secretary determines, after consultation with the Secretary of State, that living organisms of any other sedentary species are, at the harvestable stage, either—

- (A) immobile on or under the seabed, or
 - (B) unable to move except in constant physical contact with the seabed or subsoil, of the Continental Shelf which appertains to the United States, and publishes notices of such determination in the Federal Register, such sedentary species shall be considered to be added to the foregoing list and included in such term for purposes of this Act.
- (8) The term “Council” means any Regional Fishery Management Council established under section 302.
- (8a) The term ‘depleted’ and ‘depletion’ mean, with respect to a stock of fish in a fishery, that the stock is of a size that jeopardizes the capacity of the fishery to produce the maximum sustainable yield on a continuing basis.²¹
- (8a) The term ‘depleted’ means, with respect to a stock of fish or stock complex, that the stock or stock complex has a biomass that has declined below a level that jeopardizes the capacity of the stock or stock complex to produce maximum sustainable yield on a continuing basis.²²
- (9) The term “economic discards” means fish which are the target of a fishery, but which are not retained because they are of an undesirable size, sex, or quality, or for other economic reasons.
- (10) The term “essential fish habitat” means those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.
- (11) The term “exclusive economic zone” means the zone established by Proclamation Numbered 5030, dated March 10, 1983. For purposes of applying this Act, the inner boundary of that zone is a line co-terminous with the seaward boundary of each of the coastal States.
- (12) The term “fish” means finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals and birds.
- (13) The term “fishery” means—
- (A) one or more stocks of fish which can be treated as a unit for purposes of conservation and management and which are identified on the basis of geographical, scientific, technical, recreational, and economic characteristics; and
 - (B) any fishing for such stocks.
- (14) The term ‘regional fishery association’ means an association formed for the mutual benefit of members—
- (A) to meet social and economic needs in a region or subregion; and
 - (B) comprised of persons engaging in the harvest or processing of fishery resources in that specific region or subregion or who otherwise own or operate businesses substantially dependent upon a fishery.
- (15) The term “fishery resource” means any fishery, any stock of fish, any species of fish, and any habitat of fish.
- (16) The term “fishing” means—
- (A) the catching, taking, or harvesting of fish;
 - (B) the attempted catching, taking, or harvesting of fish;
 - (C) any other activity which can reasonably be expected to result in the catching, taking, or harvest-

21 Begich page 8 lines 6-10. This is the same definition as “overfished,” but allows for non-fishing causes of depletion.

22 HR 4742 page 9 lines 16-21. **Wording changed from discussion draft.**

ing of fish; or

- (D) any operations at sea in support of, or in preparation for, any activity described in subparagraphs (A) through (C).

Such term does not include any scientific research activity which is conducted by a scientific research vessel.

- (17) The term “fishing community” means a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such community.
- (18) The term “fishing vessel” means any vessel, boat, ship, or other craft which is used for, equipped to be used for, or of a type which is normally used for—
 - (A) fishing; or
 - (B) aiding or assisting one or more vessels at sea in the performance of any activity relating to fishing, including, but not limited to, preparation, supply, storage, refrigeration, transportation, or processing.
- (18A) The term ‘forage fish’ means any low trophic level fish that contributes significantly to the diets of other fish and that retains a significant role in energy transfer from lower to higher trophic levels throughout its life cycle.²³
- (19) The term “foreign fishing” means fishing by a vessel other than a vessel of the United States.
- (20) The term “high seas” means all waters beyond the territorial sea of the United States and beyond any foreign nation's territorial sea, to the extent that such sea is recognized by the United States.
- (21) The term “highly migratory species” means tuna species, marlin (*Tetrapturus* spp. and *Makaira* spp.), oceanic sharks, sailfishes (*Istiophorus* spp.), and swordfish (*Xiphias gladius*).
- (22) The term ‘import’—
 - (A) means to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, any place subject to the jurisdiction of the United States, whether or not such landing, bringing, or introduction constitutes an importation within the meaning of the customs laws of the United States; but
 - (B) does not include any activity described in subparagraph (A) with respect to fish caught in the exclusive economic zone or by a vessel of the United States.
- (23) The term “individual fishing quota” means a Federal permit under a limited access system to harvest a quantity of fish, expressed by a unit or units representing a percentage of the total allowable catch of a fishery that may be received or held for exclusive use by a person. Such term does not include community development quotas as described in section 305(i).
- (24) The term “international fishery agreement” means any bilateral or multilateral treaty, convention, or agreement which relates to fishing and to which the United States is a party.
- (25) The term “large-scale driftnet fishing” means a method of fishing in which a gillnet composed of a panel or panels of webbing, or a series of such gillnets, with a total length of two and one-half kilometers or more is placed in the water and allowed to drift with the currents and winds for the purpose of entangling fish in the webbing.
- (26) The term ‘limited access privilege’—
 - (A) means a Federal permit, issued as part of a limited access system under section 303A to harvest a quantity of fish expressed by a unit or units representing a portion of the total allowable catch of

23 Begich page 8 lines 13-17. New definition of forage fish.

- the fishery that may be received or held for exclusive use by a person; and
- (B) includes an individual fishing quota; but
 - (C) does not include community development quotas as described in section 305(i).
- (27) The term ‘limited access system’ means a system that limits participation in a fishery to those satisfying certain eligibility criteria or requirements contained in a fishery management plan or associated regulation.
- (28) The term “Marine Fisheries Commission” means the Atlantic States Marine Fisheries Commission, the Gulf States Marine Fisheries Commission, or the Pacific States Marine Fisheries Commission.
- (30) The term “migratory range” means the maximum area at a given time of the year within which fish of an anadromous species or stock thereof can be expected to be found, as determined on the basis of scale pattern analysis, tagging studies, or other reliable scientific information, except that the term does not include any part of such area which is in the waters of a foreign nation.
- (30A) The term ‘non-target fish’ means fish that are caught incidentally during the pursuit of target fish in a fishery, including regulatory discards which may or may not be retained for sale or personal use.²⁴
- (31) The term “national standards” means the national standards for fishery conservation and management set forth in section 301.
- (32) The term “observer” means any person required or authorized to be carried on a vessel for conservation and management purposes by regulations or permits under this Act.
- (33) The term ‘observer information’ means any information collected, observed, retrieved, or created by an observer or electronic monitoring system pursuant to authorization by the Secretary, or collected as part of a cooperative research initiative, including fish harvest or processing observations, fish sampling or weighing data, vessel logbook data, vessel or processor-specific information (including any safety, location, or operating condition observations), and video, audio, photographic, or written documents.
- (34) The term “optimum”, with respect to the yield from a fishery, means the amount of fish which—
- (A) will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems;
 - (B) is prescribed as such on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factor; and
 - (C) in the case of an ~~overfished~~ ~~depleted~~ fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery.
- (35) The terms ~~“overfishing”~~ and ~~“overfished”~~²⁵ means a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce the maximum sustainable yield on a continuing basis.
- (36) The term “Pacific Insular Area” means American Samoa, Guam, the Northern Mariana Islands, Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Island, Wake Island, or Palmyra Atoll, as applicable, and includes all islands and reefs appurtenant to such island, reef, or atoll.
- (37) The term “person” means any individual (whether or not a citizen or national of the United States), any corporation, partnership, association, or other entity (whether or not organized or existing under the laws of any State), and any Federal, State, ~~tribal~~, local, or foreign government or any entity of any such government.
- (38) The term “recreational fishing” means fishing for sport or pleasure.
- (39) The term “regulatory discards” means fish harvested in a fishery which fishermen are required by regu-

²⁴ Begich page 8 lines 20-24. New definition. Does not seem controversial.

²⁵ HR 4742 page 9 lines 12-13. Text says this applies to paragraph 34 but seems to be in error.

lation to discard whenever caught, or are required by regulation to retain but not sell.

- (40) The term “Secretary” means the Secretary of Commerce or his designee.
- (41) The term “special areas” means the areas referred to as eastern special areas in Article 3(1) of the Agreement between the United States of America and the Union of Soviet Socialist Republics on the Maritime Boundary, signed June 1, 1990. In particular, the term refers to those areas east of the maritime boundary, as defined in that Agreement, that lie within 200 nautical miles of the baselines from which the breadth of the territorial sea of Russia is measured but beyond 200 nautical miles of the baselines from which the breadth of the territorial sea of the United States is measured.¹
- (42) The term “State” means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and any other Commonwealth, territory, or possession of the United States.
- (42A) The term ‘subsistence fishing’ means fishing in which the fish harvested are intended for customary and traditional uses, including for direct personal or family consumption as food or clothing; for the making or selling of handicraft articles out of nonedible byproducts taken for personal or family consumption, for barter, or sharing for personal or family consumption; and for customary trade. In this paragraph, the term—
 - (A) ‘family’ means all persons related by blood, marriage, or adoption, or any person living within the household on a permanent basis; and
 - (B) ‘barter’ means the exchange of a fish or fish part—
 - (i) for another fish or fish part; or
 - (ii) for other food or for nonedible items other than money if the exchange is of a limited and noncommercial nature.
- (42B) The term ‘target fish’ means fish that are caught for sale or personal use, including economic discards.²⁶
- (43) The term “stock of fish” means a species, subspecies, geographical grouping, or other category of fish capable of management as a unit.
- (43A) The term ‘subsistence fishing’ means fishing in which the fish harvested are intended for customary and traditional uses, including for direct personal or family consumption as food or clothing; for the making or selling of handicraft articles out of nonedible byproducts taken for personal or family consumption, for barter, or sharing for personal or family consumption; and for customary trade.
 - (B) In this paragraph--
 - (i) the term ‘family’ means all persons related by blood, marriage, or adoption, or any person living within the household on a permanent basis; and
 - (ii) the term ‘barter’ means the exchange of a fish or fish part--
 - (I) for another fish or fish part; or
 - (II) for other food or for nonedible items other than money if the exchange is of a limited and noncommercial nature.²⁷
- (43A) The terms ‘tribal’ and ‘tribe’ mean an Indian tribe as defined in section 102 of the Federally Recognized Indian Tribe List Act of 1994 (25 U.S.C. 479a).²⁸
- (44) The term “treaty” means any international fishery agreement which is a treaty within the meaning of section 2 of article II of the Constitution.

26 Begich pages 9-10 lines 5-3.

27 Amendment made by Rep. Young of Alaska at markup held on 5/29/14

28 Begich page 10 lines 6-9.

- (44a)²⁹ The term “stock assessment” means an evaluation of the past, present, and future status of a stock of fish, that includes--
- (A) a range of life history characteristics for the stock, including--
 - (i) the geographical boundaries of the stock; and
 - (ii) information on age, growth, natural mortality, sexual maturity and reproduction, feeding habits, and habitat preferences of the stock; and
 - (B) fishing for the stock.³⁰
- (45) The term “tuna species” means the following: Albacore Tuna—Thunnus alalunga; Bigeye Tuna—Thunnus obesus; Bluefin Tuna—Thunnus thynnus; Skipjack Tuna—Katsuwonus pelamis; and Yellowfin Tuna—Thunnus albacares.
- (46) The term “United States”, when used in a geographical context, means all the States thereof.
- ¹ Section 102(10) of Public Law 104-297 appears to codify the definition of “special areas” at paragraph 36 after the definition of “State.” Section 405(a) of Public Law 104-297 appears to add a redundant definition of “special areas” and create numerous numbering conflicts in the definitions. The editors assume Congress intends to add one definition of “special areas” in alphabetical order.
- (47) The term “United States fish processors” means facilities located within the United States for, and vessels of the United States used or equipped for, the processing of fish for commercial use or consumption.
- (48) The term “United States harvested fish” means fish caught, taken, or harvested by vessels of the United States within any fishery regulated under this Act.
- (49) The term “vessel of the United States” means—
- (A) any vessel documented under chapter 121 of title 46, United States Code;
 - (B) any vessel numbered in accordance with chapter 123 of title 46, United States Code, and measuring less than 5 net tons;
 - (C) any vessel numbered in accordance with chapter 123 of title 46, United States Code, and used exclusively for pleasure; or
 - (D) any vessel not equipped with propulsion machinery of any kind and used exclusively for pleasure.
- (50) The term “vessel subject to the jurisdiction of the United States” has the same meaning such term has in section 3(c) of the Maritime Drug Law Enforcement Act (46 U.S.C. App. 1903(c)).
- (51) The term “waters of a foreign nation” means any part of the territorial sea or exclusive economic zone (or the equivalent) of a foreign nation, to the extent such territorial sea or exclusive economic zone is recognized by the United States.³¹

29 Begich renames this as 45 and renumbers all of the definitions.

30 Begich page 61 line 16 - page 62. This draft incorporates H.R. 3063, the Healthy Fisheries through Better Science Act, which requires the Secretary to develop (every three years) a plan to conduct stock assessments for all FMP fish stocks.

31 Begich version would renumber all of the definitions 1-56 (page 10 lines 10-13)

SEC. 4. AUTHORIZATION OF APPROPRIATIONS

16 U.S.C. 1803

There are authorized to be appropriated to the Secretary to carry out the provisions of this Act—

- ~~(1) \$337,844,000 for fiscal year 2007;~~
- ~~(2) \$347,684,000 for fiscal year 2008; —~~
- ~~(3) \$357,524,000 for fiscal year 2009;~~
- ~~(4) \$367,364,000 for fiscal year 2010;~~
- ~~(5) \$377,204,000 for fiscal year 2011;~~
- ~~(6) \$387,044,000 for fiscal year 2012; and~~
- ~~(7) \$396,875,000 for fiscal year 2013 each of fiscal years 2014 through 2018.~~³²
- (1) [XXX,XXX,XXX] for fiscal year 2015;
- (2) [XXX,XXX,XXX] for fiscal year 2016;
- (3) [XXX,XXX,XXX] for fiscal year 2017;
- (4) [XXX,XXX,XXX] for fiscal year 2018;
- (5) [XXX,XXX,XXX] for fiscal year 2019;
- (6) [XXX,XXX,XXX] for fiscal year 2020; and
- (7) [XXX,XXX,XXX] for fiscal year 2021.³³

SEC. 5. ENSURING CONSISTENT FISHERIES MANAGEMENT UNDER OTHER FEDERAL LAWS

- (a) **NATIONAL MARINE SANCTUARIES ACT AND ANTIQUITIES ACT OF 1906.**—In any case of a conflict between this Act and the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.) or the Antiquities Act of 190 (16 U.S.C. 431 et seq.), this Act shall control.
- (b) **FISHERIES RESTRICTIONS UNDER ENDANGERED SPECIES ACT OF 1973.**—To ensure transparency and consistent management of fisheries throughout their range, any restriction on the management of fish in the exclusive economic zone that is necessary to implement a recovery plan under the Endangered Species Act of 1973 (16 U.S.C 1531 et seq.) shall be implemented—
 - (1) using authority under this Act; and
 - (2) in accordance with processes and time schedules required under this Act.³⁴

³² HR 4742, page 37 lines 19+. No change from discussion draft.

³³ Begich page 12. Main difference here is timeframe.

³⁴ HR 4742 page 36. The Council supports the MSA and NMSA language. For the ESA, the Council recommends the kind of ESA integration with MSA that has recently occurred in Columbia River tule stock management. (3/14, 3/26 letter to Hastings)

TITLE I—UNITED STATES RIGHTS AND AUTHORITY REGARDING FISH AND FISHERY RESOURCES

SEC. 101. UNITED STATES SOVEREIGN RIGHTS TO FISH AND FISHERY MANAGEMENT AUTHORITY

16 U.S.C. 1811

- (a) **IN THE EXCLUSIVE ECONOMIC ZONE.**—Except as provided in section 102, the United States claims, and will exercise in the manner provided for in this Act, sovereign rights and exclusive fishery management authority over all fish, and all Continental Shelf fishery resources, within the exclusive economic zone [and special areas]*.
- (b) **BEYOND THE EXCLUSIVE ECONOMIC ZONE.**—The United States claims, and will exercise in the manner provided for in this Act, exclusive fishery management authority over the following:
 - (1) All anadromous species throughout the migratory range of each such species beyond the exclusive economic zone; except that that management authority does not extend to any such species during the time they are found within any waters of a foreign nation.
 - (2) All Continental Shelf fishery resources beyond the exclusive economic zone. [(3) All fishery resources in the special areas.]*

SEC. 102. HIGHLY MIGRATORY SPECIES

16 U.S.C. 1812

- (a) **IN GENERAL.**—The United States shall cooperate directly or through appropriate international organizations with those nations involved in fisheries for highly migratory species with a view to ensuring conservation and shall promote the achievement of optimum yield of such species throughout their range, both within and beyond the exclusive economic zone.
- (b) **TRADITIONAL PARTICIPATION.**—In managing any fisheries under an international fisheries agreement to which the United States is a party, the appropriate Council or Secretary shall take into account the traditional participation in the fishery, relative to other nations, by fishermen of the United States on fishing vessels of the United States.
- (c) **PROMOTION OF STOCK MANAGEMENT.**—If a relevant international fisheries organization does not have a process for developing a formal plan to rebuild a depleted stock, an ~~overfished~~ depleted stock, or a stock that is approaching a condition of being ~~overfished~~ depleted, the provisions of this Act in this regard shall be communicated to and promoted by the United States in the international or regional fisheries organization.

SEC. _____. PROHIBITION ON CONSIDERING RED SNAPPER KILLED DURING REMOVAL OF OIL RIGS.

Any red snapper that are killed during the removal of any offshore oil rig in the Gulf of Mexico shall not be

considered in determining under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.) whether the total allowable catch for redsnapper has been reached.³⁵

TITLE II—FOREIGN FISHING AND INTERNATIONAL FISHERY AGREEMENTS

SEC. 201. FOREIGN FISHING

16 U.S.C. 1821

- (a) **IN GENERAL.**—After February 28, 1977, no foreign fishing is authorized within the exclusive economic zone, [within the special areas,]* or for anadromous species or Continental Shelf fishery resources beyond the exclusive economic zone [such zone or areas]*, unless such foreign fishing—
- (1) is authorized under subsections (b) or (c) or section 204(e), or under a permit issued under section 204(d);
 - (2) is not prohibited by subsection (f); and
 - (3) is conducted under, and in accordance with, a valid and applicable permit issued pursuant to section 204.
- (b) **EXISTING INTERNATIONAL FISHERY AGREEMENTS.**—Foreign fishing described in subsection (a) may be conducted pursuant to an international fishery agreement (subject to the provisions of section 202(b) or (c)), if such agreement—
- (1) was in effect on the date of enactment of this Act; and
 - (2) has not expired, been renegotiated, or otherwise ceased to be of force and effect with respect to the United States.
- (c) **GOVERNING INTERNATIONAL FISHERY AGREEMENTS.**—Foreign fishing described in subsection (a) may be conducted pursuant to an international fishery agreement (other than a treaty) which meets the requirements of this subsection if such agreement becomes effective after application of section 203. Any such international fishery agreement shall hereafter in this Act be referred to as a “governing international fishery agreement”. Each governing international fishery agreement shall acknowledge the exclusive fishery management authority of the United States, as set forth in this Act. It is the sense of the Congress that each such agreement shall include a binding commitment, on the part of such foreign nation and its fishing vessels, to comply with the following terms and conditions:
- (1) The foreign nation, and the owner or operator of any fishing vessel fishing pursuant to such agreement, will abide by all regulations promulgated by the Secretary pursuant to this Act, including any regulations promulgated to implement any applicable fishery management plan or any preliminary fishery management plan.
 - (2) The foreign nation, and the owner or operator of any fishing vessel fishing pursuant to such agreement, will abide by the requirement that—
 - (A) any officer authorized to enforce the provisions of this Act (as provided for in section 311) be permitted—
 - (i) to board, and search or inspect, any such vessel at any time,
 - (ii) to make arrests and seizures provided for in section 311(b) whenever such officer has reasonable cause to believe, as a result of such a search or inspection, that any such vessel or

35 *Amendment by Rep. Southerland of Florida made at Committee markup on 5/29/14*

any person has committed an act prohibited by section 307, and

(iii) to examine and make notations on the permit issued pursuant to section 204 for such vessel;

- (B) the permit issued for any such vessel pursuant to section 204 be prominently displayed in the wheelhouse of such vessel;
- (C) transponders, or such other appropriate position-fixing and identification equipment as the Secretary of the department in which the Coast Guard is operating determines to be appropriate, be installed and maintained in working order on each such vessel;
- (D) United States observers required under subsection (h) be permitted to be stationed aboard any such vessel and that all of the costs incurred incident to such stationing, including the costs of data editing and entry and observer monitoring, be paid for, in accordance with such subsection, by the owner or operator of the vessel;
- (E) any fees required under section 204(b)(10) be paid in advance;
- (F) agents be appointed and maintained within the United States who are authorized to receive and respond to any legal process issued in the United States with respect to such owner or operator; and
- (G) responsibility be assumed, in accordance with any requirements prescribed by the Secretary, for the reimbursement of United States citizens for any loss of, or damage to, their fishing vessels, fishing gear, or catch which is caused by any fishing vessel of that nation;
and will abide by any other monitoring, compliance, or enforcement requirement related to fishery conservation and management which is included in such agreement.

(3) The foreign nation and the owners or operators of all of the fishing vessels of such nation shall not, in any year, harvest an amount of fish which exceeds such nation's allocation of the total allowable level of foreign fishing, as determined under subsection (e).

(4) The foreign nation will—

- (A) apply, pursuant to section 204, for any required permits;
- (B) deliver promptly to the owner or operator of the appropriate fishing vessel any permit which is issued under that section for such vessel;
- (C) abide by, and take appropriate steps under its own laws to assure that all such owners and operators comply with, section 204(a) and the applicable conditions and restrictions established under section 204(b)(7); and
- (D) take, or refrain from taking, as appropriate, actions of the kind referred to in subsection (e)(1) in order to receive favorable allocations under such subsection.

(d) TOTAL ALLOWABLE LEVEL OF FOREIGN FISHING.—The total allowable level of foreign fishing, if any, with respect to any fishery subject to the exclusive fishery management authority of the United States, is that portion of the optimum yield of such fishery which cannot, or will not be harvested by vessels of the United States, as determined in accordance with this Act. Allocations of the total allowable level of foreign fishing are discretionary, except that the total allowable level shall be zero for fisheries determined by the Secretary to have adequate or excess domestic harvest capacity.

(e) ALLOCATION OF ALLOWABLE LEVEL.—

(1)

- (A) The Secretary of State, in cooperation with the Secretary, may make allocations to foreign nations from the total allowable level of foreign fishing which is permitted with respect to each fishery subject to the exclusive fishery management authority of the United States.

- (B) From the determinations made under subparagraph (A), the Secretary of State shall compute the aggregate of all of the fishery allocations made to each foreign nation.
- (C) The Secretary of State shall initially release to each foreign nation for harvesting up to 50 percent of the allocations aggregate computed for such nation under subparagraph (B), and such release of allocation shall be apportioned by the Secretary of State, in cooperation with the Secretary, among the individual fishery allocations determined for that nation under subparagraph (A). The basis on which each apportionment is made under this subparagraph shall be stated in writing by the Secretary of State.
- (D) After the initial release of fishery allocations under subparagraph (C) to a foreign nation, any subsequent release of an allocation for any fishery to such nation shall only be made—
 - (i) after the lapse of such period of time as may be sufficient for purposes of making the determination required under clause (ii); and
 - (ii) if the Secretary of State and the Secretary, after taking into account the size of the allocation for such fishery and the length and timing of the fishing season, determine in writing that such nation is complying with the purposes and intent of this paragraph with respect to such fishery.

If the foreign nation is not determined under clause (ii) to be in such compliance, the Secretary of State shall reduce, in a manner and quantity he considers to be appropriate
- (I) the remainder of such allocation, or (II) if all of such allocation has been released, the next allocation of such fishery, if any, made to such nation.
- (E) The determinations required to be made under subparagraphs (A) and (D)(ii), and the apportionments required to be made under subparagraph (C), with respect to a foreign nation shall be based on—
 - (i) whether, and to what extent, such nation imposes tariff barriers or nontariff barriers on the importation, or otherwise restricts the market access, of both United States fish and fishery products, particularly fish and fishery products for which the foreign nation has requested an allocation;
 - (ii) whether, and to what extent, such nation is cooperating with the United States in both the advancement of existing and new opportunities for fisheries exports from the United States through the purchase of fishery products from United States processors, and the advancement of fisheries trade through the purchase of fish and fishery products from United States fishermen, particularly fish and fishery products for which the foreign nation has requested an allocation;
 - (iii) whether, and to what extent, such nation and the fishing fleets of such nation have cooperated with the United States in the enforcement of United States fishing regulations;
 - (iv) whether, and to what extent, such nation requires the fish harvested from the exclusive economic zone [or special areas]* for its domestic consumption;
 - (v) whether, and to what extent, such nation otherwise contributes to, or fosters the growth of, a sound and economic United States fishing industry, including minimizing gear conflicts with fishing operations of United States fishermen, and transferring harvesting or processing technology which will benefit the United States fishing industry;
 - (vi) whether, and to what extent, the fishing vessels of such nation have traditionally engaged in fishing in such fishery;
 - (vii) whether, and to what extent, such nation is cooperating with the United States in, and making substantial contributions to, fishery research and the identification of fishery resources; and
 - (viii) such other matters as the Secretary of State, in cooperation with the Secretary, deems ap-

appropriate.

- (2) (A) For the purposes of this paragraph—
 - (i) The term “certification” means a certification made by the Secretary that nationals of a foreign country, directly or indirectly, are conducting fishing operations or engaging in trade or taking which diminishes the effectiveness of the International Convention for the Regulation of Whaling. A certification under this section shall also be deemed a certification for the purposes of section 8(a) of the Fishermen's Protective Act of 1967 (22 U.S.C. 1978(a)).
 - (ii) The term “remedial period” means the 365-day period beginning on the date on which a certification is issued with respect to a foreign country.
- (B) If the Secretary issues a certification with respect to any foreign country, then each allocation under paragraph (1) that—
 - (i) is in effect for that foreign country on the date of issuance; or
 - (ii) is not in effect on such date but would, without regard to this paragraph, be made to the foreign country within the remedial period; shall be reduced by the Secretary of State, in consultation with the Secretary, by not less than 50 percent.
- (C) The following apply for purposes of administering subparagraph (B) with respect to any foreign country:
 - (i) If on the date of certification, the foreign country has harvested a portion, but not all, of the quantity of fish specified under any allocation, the reduction under subparagraph (B) for that allocation shall be applied with respect to the quantity not harvested as of such date.
 - (ii) If the Secretary notified the Secretary of State that it is not likely that the certification of the foreign country will be terminated under section 8(d) of the Fishermen's Protective Act of 1967 before the close of the period for which an allocation is applicable or before the close of the remedial period (whichever close first occurs) the Secretary of State, in consultation with the Secretary, shall reallocate any portion of any reduction made under subparagraph (B) among one or more foreign countries for which no certification is in effect.
 - (iii) If the certification is terminated under such section 8(d) during the remedial period, the Secretary of State shall return to the foreign country that portion of any allocation reduced under subparagraph (B) that was not reallocated under clause (ii); unless the harvesting of the fish covered by the allocation is otherwise prohibited under this Act.
 - (iv) The Secretary may refund or credit, by reason of reduction of any allocation under this paragraph, any fee paid under section 204.
- (D) If the certification of a foreign country is not terminated under section 8(d) of the Fishermen's Protective Act of 1967 before the close of the last day of the remedial period, the Secretary of State—
 - (i) with respect to any allocation made to that country and in effect (as reduced under subparagraph (B)) on such last day, shall rescind, effective on and after the day after such last day, any unharvested portion of such allocation; and
 - (ii) may not thereafter make any allocation to that country under paragraph (1) until the certification is terminated.

(f) RECIPROCITY.—Foreign fishing shall not be authorized for the fishing vessels of any foreign nation unless such nation satisfies the Secretary and the Secretary of State that such nation extends substantially the same fishing privileges to fishing vessels of the United States, if any, as the United States extends to for-

eign fishing vessels.

(g) PRELIMINARY FISHERY MANAGEMENT PLANS.—The Secretary, when notified by the Secretary of State that any foreign nation has submitted an application under section 204(b), shall prepare a preliminary fishery management plan for any fishery covered by such application if the Secretary determines that no fishery management plan for that fishery will be prepared and implemented, pursuant to title III, before March 1, 1977. To the extent practicable, each such plan—

- (1) shall contain a preliminary description of the fishery and a preliminary determination as to—
 - (A) the optimum yield from such fishery;
 - (B) when appropriate, the capacity and extent to which United States fish processors will process that portion of such optimum yield that will be harvested by vessels of the United States; and
 - (C) the total allowable level of foreign fishing with respect to such fishery;
- (2) shall require each foreign fishing vessel engaged or wishing to engage in such fishery to obtain a permit from the Secretary;
- (3) shall require the submission of pertinent data to the Secretary, with respect to such fishery, as described in section 303(a)(5); and
- (4) may, to the extent necessary to prevent irreversible effects from overfishing, with respect to such fishery, contain conservation and management measures applicable to foreign fishing which—
 - (A) are determined to be necessary and appropriate for the conservation and management of such fishery,
 - (B) are consistent with the national standards, the other provisions of this Act, and other applicable law, and
 - (C) are described in section 303(b)(2), (3), (4), (5), and (7).

Each preliminary fishery management plan shall be in effect with respect to foreign fishing for which permits have been issued until a fishery management plan is prepared and implemented, pursuant to title III, with respect to such fishery. The Secretary may, in accordance with section 553 of title 5, United States Code, also prepare and promulgate interim regulations with respect to any such preliminary plan. Such regulations shall be in effect until regulations implementing the applicable fishery management plan are promulgated pursuant to section 305.

(h) FULL OBSERVER COVERAGE PROGRAM.—

- (1)
 - (A) Except as provided in paragraph (2), the Secretary shall establish a program under which a United States observer will be stationed aboard each foreign fishing vessel while that vessel is engaged in fishing within the exclusive economic zone [or special areas]*.
 - (B) The Secretary shall by regulation prescribe minimum health and safety standards that shall be maintained aboard each foreign fishing vessel with regard to the facilities provided for the quartering of, and the carrying out of observer functions by, United States observers.
- (2) The requirement in paragraph (1) that a United States observer be placed aboard each foreign fishing vessel may be waived by the Secretary if he finds that—
 - (A) in a situation where a fleet of harvesting vessels transfers its catch taken within the exclusive economic zone [or special areas]* to another vessel, aboard which is a United States observer, the stationing of United States observers on only a portion of the harvesting vessel fleet will provide a representative sampling of the by-catch of the fleet that is sufficient for purposes of determining whether the requirements of the applicable management plans for the by-catch species are being complied with;

- (B) in a situation where the foreign fishing vessel is operating under a Pacific Insular Area fishing agreement, the Governor of the applicable Pacific Insular Area, in consultation with the Western Pacific Council, has established an observer coverage program or other monitoring program that the Secretary, in consultation with the Western Pacific Management Council, determines is adequate to monitor harvest, bycatch, and compliance with the laws of the United States by vessels fishing under the agreement;
 - (C) the time during which a foreign fishing vessel will engage in fishing within the exclusive economic zone [or special areas]* will be of such short duration that the placing of a United States observer aboard the vessel would be impractical; or
 - (D) for reasons beyond the control of the Secretary, an observer is not available.
- (3) Observers, while stationed aboard foreign fishing vessels, shall carry out such scientific, compliance monitoring, and other functions as the Secretary deems necessary or appropriate to carry out the purposes of this Act; and shall cooperate in carrying out such other scientific programs relating to the conservation and management of living resources as the Secretary deems appropriate.
- (4) In addition to any fee imposed under section 204(b)(10) of this Act and section 10(e) of the Fishermen's Protective Act of 1967 (22 U.S.C. 1980(e)) with respect to foreign fishing for any year after 1980, the Secretary shall impose, with respect to each foreign fishing vessel for which a permit is issued under such section 204, a surcharge in an amount sufficient to cover all the costs of providing a United States observer aboard that vessel. The failure to pay any surcharge imposed under this paragraph shall be treated by the Secretary as a failure to pay the permit fee for such vessel under section 204(b)(10). All surcharges collected by the Secretary under this paragraph shall be deposited in the Foreign Fishing Observer Fund established by paragraph (5).
- (5) There is established in the Treasury of the United States the Foreign Fishing Observer Fund. The Fund shall be available to the Secretary as a revolving fund for the purpose of carrying out this subsection. The Fund shall consist of the surcharges deposited into it as required under paragraph (4). All payments made by the Secretary to carry out this subsection shall be paid from the Fund, only to the extent and in the amounts provided for in advance in appropriation Acts. Sums in the Fund which are not currently needed for the purposes of this subsection shall be kept on deposit or invested in obligations of, or guaranteed by, the United States.
- (6) If at any time the requirement set forth in paragraph (1) cannot be met because of insufficient appropriations, the Secretary shall, in implementing a supplementary observer program:
 - (A) certify as observers, for the purposes of this subsection, individuals who are citizens or nationals of the United States and who have the requisite education or experience to carry out the functions referred to in paragraph (3);
 - (B) establish standards of conduct for certified observers equivalent to those applicable to Federal personnel;
 - (C) establish a reasonable schedule of fees that certified observers or their agents shall be paid by the owners and operators of foreign fishing vessels for observer services; and
 - (D) monitor the performance of observers to ensure that it meets the purposes of this Act.
- (i) **RECREATIONAL FISHING.**—Notwithstanding any other provision of this title, foreign fishing vessels which are not operated for profit may engage in recreational fishing within the exclusive economic zone, [special areas,]* and the waters within the boundaries of a State subject to obtaining such permits, paying such reasonable fees, and complying with such conditions and restrictions as the Secretary and the Governor of the State (or his designee) shall impose as being necessary or appropriate to insure that the fishing activity of such foreign vessels within such zone, [areas,]* or waters, respectively, is consistent with all applicable Federal and State laws and any applicable fishery management plan implemented under section 304. The Secretary shall consult with the Secretary of State and the Secretary of the Department in which the Coast Guard is operating in formulating the conditions and restrictions to be applied by the Secretary under the

authority of this subsection.

SEC. 202. INTERNATIONAL FISHERY AGREEMENTS

16 U.S.C. 1822

(a) NEGOTIATIONS.—The Secretary of State—

- (1) shall renegotiate treaties as provided for in subsection (b);
- (2) shall negotiate governing international fishery agreements described in section 201(c);
- (3) may negotiate boundary agreements as provided for in subsection (d);
- (4) shall, upon the request of and in cooperation with the Secretary, initiate and conduct negotiations for the purpose of entering into international fishery agreements--
 - (A) which allow fishing vessels of the United States equitable access to fish over which foreign nations assert exclusive fishery management authority, and
 - (B) which provide for the conservation and management of anadromous species and highly migratory species; and
- (5) may enter into such other negotiations, not prohibited by subsection (c), as may be necessary and appropriate to further the purposes, policy, and provisions of this Act.

(b) TREATY RENEGOTIATION.—The Secretary of State, in cooperation with the Secretary, shall initiate, promptly after the date of enactment of this Act, the renegotiation of any treaty which pertains to fishing within the exclusive economic zone (or within the area that will constitute such zone after February 28, 1977) [or special areas]*, or for anadromous species or Continental Shelf fishery resources beyond such zone or area[s]*, and which is in any manner inconsistent with the purposes, policy, or provisions of this Act, in order to conform such treaty to such purposes, policy, and provisions. It is the sense of Congress that the United States shall withdraw from any such treaty, in accordance with its provisions, if such treaty is not so renegotiated within a reasonable period of time after such date of enactment.

(c) INTERNATIONAL FISHERY AGREEMENTS.—No international fishery agreement (other than a treaty) which pertains to foreign fishing within the exclusive economic zone (or within the area that will constitute such zone after February 28, 1977) [or special areas,]* or for anadromous species or Continental Shelf fishery resources beyond such zone or area[s]*—

- (1) which is in effect on June 1, 1976, may thereafter be renewed, extended, or amended; or
 - (2) may be entered into after May 31, 1976;
- by the United States unless it is in accordance with the provisions of section 201(c) or section 204(e).

(d) BOUNDARY NEGOTIATIONS.—The Secretary of State, in cooperation with the Secretary, may initiate and conduct negotiations with any adjacent or opposite foreign nation to establish the boundaries of the exclusive economic zone of the United States in relation to any such nation.

(e) HIGHLY MIGRATORY SPECIES AGREEMENTS.—

- (1) EVALUATION.—The Secretary of State, in cooperation with the Secretary, shall evaluate the effectiveness of each existing international fishery agreement which pertains to fishing for highly migratory species. Such evaluation shall consider whether the agreement provides for—
 - (A) the collection and analysis of necessary information for effectively managing the fishery, including but not limited to information about the number of vessels involved, the type and quantity of fishing gear used, the species of fish involved and their location, the catch and bycatch levels in the fishery, and the present and probable future condition of any stock of fish involved;
 - (B) the establishment of measures applicable to the fishery which are necessary and appropriate for

the conservation and management of the fishery resource involved;

- (C) equitable arrangements which provide fishing vessels of the United States with (i) access to the highly migratory species that are the subject of the agreement and (ii) a portion of the allowable catch that reflects the traditional participation by such vessels in the fishery;
- (D) effective enforcement of conservation and management measures and access arrangements throughout the area of jurisdiction; and
- (E) sufficient and dependable funding to implement the provisions of the agreement, based on reasonable assessments of the benefits derived by participating nations.

(2) **ACCESS NEGOTIATIONS.**—The Secretary of State, in cooperation with the Secretary, shall initiate negotiations with respect to obtaining access for vessels of the United States fishing for tuna species within the exclusive economic zones of other nations on reasonable terms and conditions.

(3) **REPORTS.**—The Secretary of State shall report to the Congress—

- (A) within 12 months after the date of enactment of this subsection, on the results of the evaluation required under paragraph (1), together with recommendations for addressing any inadequacies identified; and
- (B) within six months after such date of enactment, on the results of the access negotiations required under paragraph (2).

(4) **NEGOTIATION.**—The Secretary of State, in consultation with the Secretary, shall undertake such negotiations with respect to international fishery agreements on highly migratory species as are necessary to correct inadequacies identified as a result of the evaluation conducted under paragraph (1).

(5) **SOUTH PACIFIC TUNA TREATY.**—It is the sense of the Congress that the United States Government shall, at the earliest opportunity, begin negotiations for the purpose of extending the Treaty on Fisheries Between the Governments of Certain Pacific Island States and the Government of the United States of America, signed at Port Moresby, Papua New Guinea, April 2, 1987, and it[s] Annexes, Schedules, and implementing agreements for an additional term of 10 years on terms and conditions at least as favorable to vessels of the United States and the United States Government.

(f) NONRECOGNITION.—It is the sense of the Congress that the United States Government shall not recognize the claim of any foreign nation to an exclusive economic zone (or the equivalent) beyond such nation's territorial sea, to the extent that such sea is recognized by the United States, if such nation—

- (1) fails to consider and take into account traditional fishing activity of fishing vessels of the United States;
- (2) fails to recognize and accept that highly migratory species are to be managed by applicable international fishery agreements, whether or not such nation is a party to any such agreement; or
- (3) imposes on fishing vessels of the United States any conditions or restrictions which are unrelated to fishery conservation and management.

(g) FISHERY AGREEMENT WITH UNION OF SOVIET SOCIALIST REPUBLICS.—

- (1) The Secretary of State, in consultation with the Secretary, is authorized to negotiate and conclude a fishery agreement with Russia of a duration of no more than 3 years, pursuant to which—
 - (A) Russia will give United States fishing vessels the opportunity to conduct traditional fisheries within the waters claimed by the United States prior to the conclusion of the Agreement between the United States of America and the Union of Soviet Socialist Republics on the Maritime Boundary, signed June 1, 1990, west of the maritime boundary, including the western special area described in Article 3(2) of the Agreement;
 - (B) the United States will give fishing vessels of Russia the opportunity to conduct traditional fisheries within waters claimed by the Union of Soviet Socialist Republics prior to the conclusion of the Agreement referred to in subparagraph (A), east of the maritime boundary, including the eastern

special areas described in Article 3(1) of the Agreement;

- (C) catch data shall be made available to the government of the country exercising fisheries jurisdiction over the waters in which the catch occurred; and
 - (D) each country shall have the right to place observers on board vessels of the other country and to board and inspect such vessels.
- (2) Vessels operating under a fishery agreement negotiated and concluded pursuant to paragraph (1) shall be subject to regulations and permit requirements of the country in whose waters the fisheries are conducted only to the extent such regulations and permit requirements are specified in that agreement.
 - (3) The Secretary of Commerce may promulgate such regulations, in accordance with section 553 of title 5, United States Code, as may be necessary to carry out the provisions of any fishery agreement negotiated and concluded pursuant to paragraph (1).

(h) BYCATCH REDUCTION AGREEMENTS.—

- (1) The Secretary of State, in cooperation with the Secretary, shall seek to secure an international agreement to establish standards and measures for bycatch reduction that are comparable to the standards and measures applicable to United States fishermen for such purposes in any fishery regulated pursuant to this Act for which the Secretary, in consultation with the Secretary of State, determines that such an international agreement is necessary and appropriate.
- (2) An international agreement negotiated under this subsection shall be—
 - (A) consistent with the policies and purposes of this Act; and
 - (B) subject to approval by Congress under section 203.
- (3) Not later than January 1, 1997, and annually thereafter, the Secretary, in consultation with the Secretary of State, shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Resources of the House of Representatives a report describing actions taken under this subsection.

SEC. 202A. SECRETARIAL REPRESENTATIVE FOR INTERNATIONAL FISHERIES

- (a) **IN GENERAL.**—The Secretary, in consultation with the Under Secretary of Commerce for Oceans and Atmosphere, shall designate a senior official who is appointed by the President, by and with the advice and consent of the Senate, to serve as the Secretarial Representative for International Fisheries for the purpose of performing the duties of the Secretary with respect to international agreements involving fisheries and other living marine resources, including the development of policy and representation of the United States as a Commissioner under such international agreements.
- (b) **ADVICE.**—The Secretarial Representative for International Fisheries shall, in consultation with the Deputy Assistant Secretary for International Affairs and the Administrator of the National Marine Fisheries Service, advise the Secretary, Undersecretary of Commerce for Oceans and Atmosphere, and other senior officials of the Department of Commerce and the National Oceanic and Atmospheric Administration on development of policy on international fishery conservation and management matters.
- (c) **CONSULTATION.**—The Secretarial Representative for International Fisheries shall consult with the Committee on Natural Resources of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on matters pertaining to any regional or international negotiation concerning living marine resources.³⁶

³⁶ Begich pages 78-79. Creates a new high level post, “Secretarial Representative for International Fisheries,” to advise on international fisheries policy. This was previously in the appendix to the MSA.

SEC. 203. CONGRESSIONAL OVERSIGHT OF 16 U.S.C. 1823 INTERNATIONAL FISHERY AGREEMENTS

- (a) **IN GENERAL.**—No governing international fishery agreement, bycatch reduction agreement, or Pacific Insular Area fishery agreement shall become effective with respect to the United States before the close of the first 120 calendar days (excluding any days in a period for which the Congress is adjourned sine die) after the date on which the President transmits to the House of Representatives and to the Senate a document setting forth the text of such governing international fishery agreement, bycatch reduction agreement, or Pacific Insular Area fishery agreement. A copy of the document shall be delivered to each House of Congress on the same day and shall be delivered to the Clerk of the House of Representatives, if the House is not in session, and to the Secretary of the Senate, if the Senate is not in session.
- (b) **REFERRAL TO COMMITTEES.**—Any document described in subsection (a) shall be immediately referred in the House of Representatives to the Committee on Merchant Marine and Fisheries, and in the Senate to the Committees on Commerce and Foreign Relations.
- (c) **CONGRESSIONAL PROCEDURES.**—
- (1) **RULES OF THE HOUSE OF REPRESENTATIVES AND SENATE.**—The provisions of this section are enacted by the Congress—
 - (A) as an exercise of the rulemaking power of the House of Representatives and the Senate, respectively, and they are deemed a part of the rules of each House, respectively, but applicable only with respect to the procedure to be followed in that House in the case of fishery agreement resolutions described in paragraph (2), and they supersede other rules only to the extent that they are inconsistent therewith; and
 - (B) with full recognition of the constitutional right of either House to change the rules (so far as they relate to the procedure of that House) at any time, and in the same manner and to the same extent as in the case of any other rule of that House.
 - (2) **DEFINITION.**—For purposes of this subsection, the term “fishery agreement resolution” refers to a joint resolution of either House of Congress—
 - (A) the effect of which is to prohibit the entering into force and effect of any governing international fishery agreement, bycatch reduction agreement, or Pacific Insular Area fishery agreement the text of which is transmitted to the Congress pursuant to subsection (a); and
 - (B) which is reported from the Committee on Merchant Marine and Fisheries of the House of Representatives or the Committee on Commerce or the Committee on Foreign Relations of the Senate, not later than 45 days after the date on which the document described in subsection (a) relating to that agreement is transmitted to the Congress.
 - (3) **PLACEMENT ON CALENDAR.** —Any fishery agreement resolution upon being reported shall immediately be placed on the appropriate calendar.
 - (4) **FLOOR CONSIDERATION IN THE HOUSE.**—
 - (A) A motion in the House of Representatives to proceed to the consideration of any fishery agreement resolution shall be highly privileged and not debatable. An amendment to the motion shall not be in order, nor shall it be in order to move to reconsider the vote by which the motion is agreed to or disagreed to.
 - (B) Debate in the House of Representatives on any fishery agreement resolution shall be limited to not more than 10 hours, which shall be divided equally between those favoring and those opposing the resolution. A motion further to limit debate shall not be debatable. It shall not be in order to move to recommit any fishery agreement resolution or to move to reconsider the vote by which any fishery agreement resolution is agreed to or disagreed to.
 - (C) Motions to postpone, made in the House of Representatives with respect to the consideration of

any fishery agreement resolution, and motions to proceed to the consideration of other business, shall be decided without debate.

- (D) All appeals from the decisions of the Chair relating to the application of the Rules of the House of Representatives to the procedure relating to any fishery agreement resolution shall be decided without debate.
 - (E) Except to the extent specifically provided in the preceding provisions of this subsection, consideration of any fishery agreement resolution shall be governed by the Rules of the House of Representatives applicable to other bills and resolutions in similar circumstances.
- (5) FLOOR CONSIDERATION IN THE SENATE.—
- (A) A motion in the Senate to proceed to the consideration of any fishery agreement resolution shall be privileged and not debatable. An amendment to the motion shall not be in order, nor shall it be in order to move to reconsider the vote by which the motion is agreed to or disagreed to.
 - (B) Debate in the Senate on any fishery agreement resolution and on all debatable motions and appeals in connection therewith shall be limited to not more than 10 hours. The time shall be equally divided between, and controlled by, the majority leader and the minority leader or their designees.
 - (C) Debate in the Senate on any debatable motion or appeal in connection with any fishery agreement resolution shall be limited to not more than 1 hour, to be equally divided between, and controlled by, the mover of the motion or appeal and the manager of the resolution, except that if the manager of the resolution is in favor of any such motion or appeal, the time in opposition thereto shall be controlled by the minority leader or his designee. The majority leader and the minority leader, or either of them, may allot additional time to any Senator during the consideration of any debatable motion or appeal, from time under their control with respect to the applicable fishery agreement resolution.
 - (D) A motion in the Senate to further limit debate is not debatable. A motion to recommit any fishery agreement resolution is not in order

SEC. 204. PERMITS FOR FOREIGN FISHING

16 U.S.C. 1824

- (a) **IN GENERAL.**—After February 28, 1977, no foreign fishing vessel shall engage in fishing within the exclusive economic zone [within the special areas]*, or for anadromous species or Continental Shelf fishery resources beyond such zone [or areas]*, unless such vessel has on board a valid permit issued under this section for such vessel.
- (b) **APPLICATIONS AND PERMITS UNDER GOVERNING INTERNATIONAL FISHERY AGREEMENTS.**—
 - (1) **ELIGIBILITY.**—Each foreign nation with which the United States has entered into a governing international fishery agreement shall submit an application to the Secretary of State each year for a permit for each of its fishing vessels that wishes to engage in fishing described in subsection (a). No permit issued under this section may be valid for longer than a year; and section 558(c) of title 5, United States Code, does not apply to the renewal of any such permit.
 - (2) **FORMS.**—The Secretary, in consultation with the Secretary of State and the Secretary of the department in which the Coast Guard is operating, shall prescribe the forms for permit applications submitted under this subsection and for permits issued pursuant to any such application.
 - (3) **CONTENTS.**—Any application made under this subsection shall specify—
 - (A) the name and official number or other identification of each fishing vessel for which a permit is sought, together with the name and address of the owner thereof;
 - (B) the tonnage, hold capacity, speed, processing equipment, type and quantity of fishing gear, and

such other pertinent information with respect to characteristics of each such vessel as the Secretary may require;

- (C) each fishery in which each such vessel wishes to fish;
 - (D) the estimated amount of tonnage of fish which will be caught, taken, or harvested in each such fishery by each such vessel during the time the permit is in force;
 - (E) the amount or tonnage of United States harvested fish, if any, which each such vessel proposes to receive at sea from vessels of the United States; (F) the ocean area in which, and the season or period during which, such fishing will be conducted; and (G) all applicable vessel safety standards imposed by the foreign country, and shall include written certification that the vessel is in compliance with those standards; and shall include any other pertinent information and material which the Secretary may require.
- (4) TRANSMITTAL FOR ACTION.—Upon receipt of any application which complies with the requirements of paragraph (3), the Secretary of State shall publish a notice of receipt of the application in the Federal Register. Any such notice shall summarize the contents of the applications from each nation included therein with respect to the matters described in paragraph (3). The Secretary of State shall promptly transmit—
- (A) such application, together with his comments and recommendations thereon, to the Secretary;
 - (B) a copy of the application to the Secretary of the department in which the Coast Guard is operating; and
 - (C) a copy or a summary of the application to the appropriate Council.
- (5) ACTION BY COUNCIL.—After receiving a copy or summary of an application under paragraph (4) (C), the Council may prepare and submit to the Secretary such written comments on the application as it deems appropriate. Such comments shall be submitted within 45 days after the date on which the application is received by the Council and may include recommendations with respect to approval of the application and, if approval is recommended, with respect to appropriate conditions and restrictions thereon. Any interested person may submit comments to such Council with respect to any such application. The Council shall consider any such comments in formulating its submission to the Secretary.
- (6) APPROVAL.—
- (A) After receipt of any application transmitted under paragraph (4)(A), the Secretary shall consult with the Secretary of State and, with respect to enforcement, with the Secretary of the department in which the Coast Guard is operating. The Secretary, after taking into consideration the views and recommendations of such Secretaries, and any comments submitted by any Council under paragraph (5), may approve, subject to subparagraph (B), the application, if he determines that the fishing described in the application will meet the requirements of this Act, or he may disapprove all or any portion of the application.
 - (B)
 - (i) In the case of any application which specifies that one or more foreign fishing vessels propose to receive at sea United States harvested fish from vessels of the United States, the Secretary may approve the application unless the Secretary determines, on the basis of the views, recommendations, and comments referred to in subparagraph (A) and other pertinent information, that United States fish processors have adequate capacity, and will utilize such capacity, to process all United States harvested fish from the fishery concerned.
 - (ii) The amount or tonnage of United States harvested fish which may be received at sea during any year by foreign fishing vessels under permits approved under this paragraph may not exceed that portion of the optimum yield of the fishery concerned which will not be utilized by United States fish processors.
 - (iii) In deciding whether to approve any application under this subparagraph, the Secretary may take into account, with respect to the foreign nation concerned, such other matters as the Secretary deems appropriate.

- (7) ESTABLISHMENT OF CONDITIONS AND RESTRICTIONS.—The Secretary shall establish conditions and restrictions which shall be included in each permit issued pursuant to any application approved under paragraph (6) or subsection (d) and which must be complied with by the owner or operator of the fishing vessel for which the permit is issued. Such conditions and restrictions shall include the following:
- (A) All of the requirements of any applicable fishery management plan, or preliminary fishery management plan, and any applicable Federal or State fishing regulations.
 - (B) The requirement that no permit may be used by any vessel other than the fishing vessel for which it is issued.
 - (C) The requirements described in section 201(c)(1), (2), and (3).
 - (D) If the permit is issued other than pursuant to an application approved under paragraph (6)(B) or subsection (d), the restriction that the foreign fishing vessel may not receive at sea United States harvested fish from vessels of the United States.
 - (E) If the permit is issued pursuant to an application approved under paragraph (6)(B), the maximum amount or tonnage of United States harvested fish which may be received at sea from vessels of the United States.
 - (F) Any other condition and restriction related to fishery conservation and management which the Secretary prescribes as necessary and appropriate.
- (8) NOTICE OF APPROVAL.—The Secretary shall promptly transmit a copy of each application approved under paragraph (6) and the conditions and restrictions established under paragraph (7) to—
- (A) the Secretary of State for transmittal to the foreign nation involved;
 - (B) the Secretary of the department in which the Coast Guard is operating; and
 - (C) any Council which has authority over any fishery specified in such application.
- (9) DISAPPROVAL OF APPLICATIONS.—If the Secretary does not approve any application submitted by a foreign nation under this subsection, he shall promptly inform the Secretary of State of the disapproval and his reasons therefore. The Secretary of State shall notify such foreign nation of the disapproval and the reasons therefor. Such foreign nation, after taking into consideration the reasons for disapproval, may submit a revised application under this subsection.
- (10) FEES.—
- (A) Fees shall be paid to the Secretary by the owner or operator of any foreign fishing vessel for which a permit has been issued pursuant to this section. The Secretary, in consultation with the Secretary of State, shall establish a schedule of reasonable fees that shall apply nondiscriminately to each foreign nation.
 - (B) Amounts collected by the Secretary under this paragraph shall be deposited in the general fund of the Treasury.
- (11) ISSUANCE OF PERMITS.—If a foreign nation notifies the Secretary of State of its acceptance of the conditions and restrictions established by the Secretary under paragraph (7), the Secretary of State shall promptly transmit such notification to the Secretary. Upon payment of the applicable fees established pursuant to paragraph (10), the Secretary shall thereupon issue to such foreign nation, through the Secretary of State, permits for the appropriate fishing vessels of that nation. Each permit shall contain a statement of all conditions and restrictions established under paragraph (7) which apply to the fishing vessel for which the permit is issued.

- (c) **REGISTRATION PERMITS.—The Secretary of State, in cooperation with the Secretary, shall issue annually a registration permit for each fishing vessel of a foreign nation which is a party to an international fishery agreement under which foreign fishing is authorized by section 201(b) and which wishes to engage in fishing described in subsection (a). Each such permit shall set forth the terms and conditions contained in**

the agreement that apply with respect to such fishing, and shall include the additional requirement that the owner or operator of the fishing vessel for which the permit is issued shall prominently display such permit in the wheelhouse of such vessel and show it, upon request, to any officer authorized to enforce the provisions of this Act (as provided for in section 311). The Secretary of State, after consultation with the Secretary and the Secretary of the department in which the Coast Guard is operating, shall prescribe the form and manner in which applications for registration permits may be made, and the forms of such permits. The Secretary of State may establish, require the payment of, and collect fees for registration permits; except that the level of such fees shall not exceed the administrative costs incurred by him in issuing such permits.

(d) TRANSSHIPMENT PERMITS—

- (1) **AUTHORITY TO ISSUE PERMITS.**—The Secretary may issue a transshipment permit under this subsection which authorizes a vessel other than a vessel of the United States to engage in fishing consisting solely of transporting fish or fish products at sea from a point within the exclusive economic zone or, with the concurrence of a State, within the boundaries of that State, to a point outside the United States to any person who—
 - (A) submits an application which is approved by the Secretary under paragraph (3); and
 - (B) pays a fee imposed under paragraph (7).
- (2) **TRANSMITTAL.**—Upon receipt of an application for a permit under this subsection, the Secretary shall promptly transmit copies of the application to the Secretary of State, Secretary of the department in which the Coast Guard is operating, any appropriate Council, and any affected State.
- (3) **APPROVAL OF APPLICATION.**—The Secretary may approve, in consultation with the appropriate Council or Marine Fisheries Commission, an application for a permit under this section if the Secretary determines that—
 - (A) the transportation of fish or fish products to be conducted under the permit, as described in the application, will be in the interest of the United States and will meet the applicable requirements of this Act;
 - (B) the applicant will comply with the requirements described in section 201(c)(2) with respect to activities authorized by any permit issued pursuant to the application;
 - (C) the applicant has established any bonds or financial assurances that may be required by the Secretary; and
 - (D) no owner or operator of a vessel of the United States which has adequate capacity to perform the transportation for which the application is submitted has indicated to the Secretary an interest in performing the transportation at fair and reasonable rates.
- (4) **WHOLE OR PARTIAL APPROVAL.**—The Secretary may approve all or any portion of an application under paragraph (3).
- (5) **FAILURE TO APPROVE APPLICATION.**—If the Secretary does not approve any portion of an application submitted under paragraph (1), the Secretary shall promptly inform the applicant and specify the reasons therefor.
- (6) **CONDITIONS AND RESTRICTIONS.**—The Secretary shall establish and include in each permit under this subsection conditions and restrictions, including those conditions and restrictions set forth in subsection (b)(7), which shall be complied with by the owner and operator of the vessel for which the permit is issued.
- (7) **FEES.**—The Secretary shall collect a fee for each permit issued under this subsection, in an amount adequate to recover the costs incurred by the United States in issuing the permit, except that the Secretary shall waive the fee for the permit if the foreign nation under which the vessel is registered does not collect a fee from a vessel of the United States engaged in similar activities in the waters of such foreign nation.

(e) PACIFIC INSULAR AREAS.—

- (1) **NEGOTIATION OF PACIFIC INSULAR AREA FISHERY AGREEMENTS.**—The Secretary of State, with the concurrence of the Secretary and in consultation with any appropriate Council, may negotiate and enter into a Pacific Insular Area fishery agreement to authorize foreign fishing within the exclusive economic zone adjacent to a Pacific Insular Area—
 - (A) in the case of American Samoa, Guam, or the Northern Mariana Islands, at the request and with the concurrence of, and in consultation with, the Governor of the Pacific Insular Area to which such agreement applies; and
 - (B) in the case of a Pacific Insular Area other than American Samoa, Guam, or the Northern Mariana Islands, at the request of the Western Pacific Council.
- (2) **AGREEMENT TERMS AND CONDITIONS.**—A Pacific Insular Area fishery agreement—
 - (A) shall not be considered to supersede any governing international fishery agreement currently in effect under this Act, but shall provide an alternative basis for the conduct of foreign fishing within the exclusive economic zone adjacent to Pacific Insular Areas;
 - (B) shall be negotiated and implemented consistent only with the governing international fishery agreement provisions of this title specifically made applicable in this subsection;
 - (C) may not be negotiated with a nation that is in violation of a governing international fishery agreement in effect under this Act;
 - (D) shall not be entered into if it is determined by the Governor of the applicable Pacific Insular Area with respect to agreements initiated under paragraph (1)(A), or the Western Pacific Council with respect to agreements initiated under paragraph (1)(B), that such an agreement will adversely affect the fishing activities of the indigenous people of such Pacific Insular Area;
 - (E) shall be valid for a period not to exceed three years and shall only become effective according to the procedures in section 203; and
 - (F) shall require the foreign nation and its fishing vessels to comply with the requirements of paragraphs (1), (2), (3) and (4)(A) of section 201(c), section 201(d), and section 201(h).
- (3) **PERMITS FOR FOREIGN FISHING.**—
 - (A) Application for permits for foreign fishing authorized under a Pacific Insular Areas fishing agreement shall be made, considered and approved or disapproved in accordance with paragraphs (3), (4), (5), (6), (7) (A) and (B), (8), and (9) of subsection (b), and shall include any conditions and restrictions established by the Secretary in consultation with the Secretary of State, the Secretary of the department in which the Coast Guard is operating, the Governor of the applicable Pacific Insular Area, and the appropriate Council.
 - (B) If a foreign nation notifies the Secretary of State of its acceptance of the requirements of this paragraph, paragraph (2)(F), and paragraph (5), including any conditions and restrictions established under subparagraph (A), the Secretary of State shall promptly transmit such notification to the Secretary. Upon receipt of any payment required under a Pacific Insular Area fishing agreement, the Secretary shall thereupon issue to such foreign nation, through the Secretary of State, permits for the appropriate fishing vessels of that nation. Each permit shall contain a statement of all of the requirements, conditions, and restrictions established under this subsection which apply to the fishing vessel for which the permit is issued.
- (4) **MARINE CONSERVATION PLANS.**—
 - (A) Prior to entering into a Pacific Insular Area fishery agreement, the Western Pacific Council and the appropriate Governor shall develop a 3-year marine conservation plan detailing uses for funds to be collected by the Secretary pursuant to such agreement. Such plan shall be consistent with any applicable fishery management plan, identify conservation and management objectives (including criteria for determining when such objectives have been met), and prioritize planned

marine conservation projects. Conservation and management objectives shall include, but not be limited to—

- (i) Pacific Insular Area observer programs, or other monitoring programs, that the Secretary determines are adequate to monitor the harvest, bycatch, and compliance with the laws of the United States by foreign fishing vessels that fish under Pacific Insular Area fishing agreements;
 - (ii) conduct of marine and fisheries research, including development of systems for information collection, analysis, evaluation, and reporting;
 - (iii) conservation, education, and enforcement activities related to marine and coastal management, such as living marine resource assessments, habitat monitoring and coastal studies;
 - (iv) grants to the University of Hawaii for technical assistance projects by the Pacific Island Network, such as education and training in the development and implementation of sustainable marine resources development projects, scientific research, and conservation strategies; and
 - (v) western Pacific community-based demonstration projects under section 112(b) of the Sustainable Fisheries Act and other coastal improvement projects to foster and promote the management, conservation, and economic enhancement of the Pacific Insular Areas.
 - (B) In the case of American Samoa, Guam, and the Northern Mariana Islands, the appropriate Governor, with the concurrence of the Western Pacific Council, shall develop the marine conservation plan described in subparagraph (A) and submit such plan to the Secretary for approval. In the case of other Pacific Insular Areas, the Western Pacific Council shall develop and submit the marine conservation plan described in subparagraph (A) to the Secretary for approval.
 - (C) If a Governor or the Western Pacific Council intends to request that the Secretary of State renew a Pacific Insular Area fishery agreement, a subsequent 3-year plan shall be submitted to the Secretary for approval by the end of the second year of the existing 3-year plan.
- (5) RECIPROCAL CONDITIONS.—Except as expressly provided otherwise in this subsection, a Pacific Insular Area fishing agreement may include terms similar to the terms applicable to United States fishing vessels for access to similar fisheries in waters subject to the fisheries jurisdiction of another nation.
- (6) USE OF PAYMENTS BY AMERICAN SAMOA, GUAM, NORTHERN MARIANA ISLANDS.—Any payments received by the Secretary under a Pacific Insular Area fishery agreement for American Samoa, Guam, or the Northern Mariana Islands shall be deposited into the United States Treasury and then covered over to the Treasury of the Pacific Insular Area for which those funds were collected. Amounts deposited in the Treasury of a Pacific Insular Area shall be available, without appropriation or fiscal year limitation, to the Governor of the Pacific Insular Area—
- (A) to carry out the purposes of this subsection;
 - (B) to compensate (i) the Western Pacific Council for mutually agreed upon administrative costs incurred relating to any Pacific Insular Area fishery agreement for such Pacific Insular Area, and (ii) the Secretary of State for mutually agreed upon travel expenses for no more than 2 Federal representatives incurred as a direct result of complying with paragraph (1)(A); and
 - (C) to implement a marine conservation plan developed and approved under paragraph (4).
- (7) WESTERN PACIFIC SUSTAINABLE FISHERIES FUND.—There is established in the United States Treasury a Western Pacific Sustainable Fisheries Fund into which any payments received by the Secretary under a Pacific Insular Area fishery agreement and any funds or contributions received in support of conservation and management objectives under a marine conservation plan for any Pacific Insular Area other than American Samoa, Guam, or the Northern Mariana Islands shall be deposited. The Western Pacific Sustainable Fisheries Fund shall be made available, without appropriation or fiscal year limitation, to the Secretary, who shall provide such funds only to—

- (A) the Western Pacific Council for the purpose of carrying out the provisions of this subsection, including implementation of a marine conservation plan approved under paragraph (4);
 - (B) the Secretary of State for mutually agreed upon travel expenses for no more than 2 Federal representatives incurred as a direct result of complying with paragraph (1)(B); and
 - (C) the Western Pacific Council to meet conservation and management objectives in the State of Hawaii if monies remain in the Western Pacific Sustainable Fisheries Fund after the funding requirements of subparagraphs (A) and (B) have been satisfied. Amounts deposited in such fund shall not diminish funding received by the Western Pacific Council for the purpose of carrying out other responsibilities under this Act.
- (8) **USE OF FINES AND PENALTIES.**—In the case of violations occurring within the exclusive economic zone off American Samoa, Guam, or the Northern Mariana Islands, amounts received by the Secretary which are attributable to fines or penalties imposed under this Act, including such sums collected from the forfeiture and disposition or sale of property seized subject to its authority, after payment of direct costs of the enforcement action to all entities involved in such action, shall be deposited into the Treasury of the Pacific Insular Area adjacent to the exclusive economic zone in which the violation occurred, to be used for fisheries enforcement and for implementation of a marine conservation plan under paragraph (4). In the case of violations by foreign vessels occurring within the exclusive economic zones off Midway Atoll, Johnston Atoll, Kingman Reef, Palmyra Atoll, Jarvis, Howland, Baker, and Wake Islands, amounts received by the Secretary attributable to fines and penalties imposed under this Act, shall be deposited into the Western Pacific Sustainable Fisheries Fund established under paragraph (7) of this subsection.

P.L. 104-297, sec. 105(e), MSA § 204 note

ATLANTIC HERRING TRANSSHIPMENT—Within 30 days of receiving an application, the Secretary shall, under section 204(d) of the Magnuson Fishery Conservation and Management Act, as amended by this Act [Public Law 104-297], issue permits to up to fourteen Canadian transport vessels that are not equipped for fish harvesting or processing, for the transshipment, within the boundaries of the State of Maine or within the portion of the exclusive economic zone east of the line 69 degrees 30 minutes west and within 12 nautical miles from the seaward boundary of that State, of Atlantic herring harvested by United States fishermen within the area described and used solely in sardine processing. In issuing a permit pursuant to this subsection, the Secretary shall provide a waiver under section 201(h)(2)(C) of the Magnuson Fishery Conservation and Management Act, as amended by this Act: Provided, That such vessels comply with Federal or State monitoring and reporting requirements for the Atlantic herring fishery, including the stationing of United States observers aboard such vessels, if necessary.

SEC. 205. IMPORT PROHIBITIONS

16 U.S.C. 1825

(a) DETERMINATIONS BY SECRETARY OF STATE.—If the Secretary of State determines that—

- (1) he has been unable, within a reasonable period of time, to conclude with any foreign nation an international fishery agreement allowing fishing vessels of the United States equitable access to fisheries over which that nation asserts exclusive fishery management authority, including fisheries for tuna species, as recognized by the United States, in accordance with fishing activities of such vessels, if any, and under terms not more restrictive than those established under sections 201(c) and (d) and 204(b)(7) and (10), because such nation has (A) refused to commence negotiations, or (B) failed to negotiate in good faith;
- (2) any foreign nation is not allowing fishing vessels of the United States to engage in fishing for tuna species in accordance with an applicable international fishery agreement, whether or not such nation is a party thereto;
- (3) any foreign nation is not complying with its obligations under any existing international fishery agreement concerning fishing by fishing vessels of the United States in any fishery over which that nation

asserts exclusive fishery management authority; or

- (4) any fishing vessel of the United States, while fishing in waters beyond any foreign nation's territorial sea, to the extent that such sea is recognized by the United States, is seized by any foreign nation—

- (A) in violation of an applicable international fishery agreement;

- (B) without authorization under an agreement between the United States and such nation; or

- (C) as a consequence of a claim of jurisdiction which is not recognized by the United States;

he shall certify such determination to the Secretary of the Treasury.

- (b) PROHIBITIONS.—Upon receipt of any certification from the Secretary of State under subsection (a), the Secretary of the Treasury shall immediately take such action as may be necessary and appropriate to prohibit the importation into the United States—**

- (1) of all fish and fish products from the fishery involved, if any; and

- (2) upon recommendation of the Secretary of State, such other fish or fish products, from any fishery of the foreign nation concerned, which the Secretary of State finds to be appropriate to carry out the purposes of this section.

- (c) REMOVAL OF PROHIBITION.—If the Secretary of State finds that the reasons for the imposition of any import prohibition under this section no longer prevail, the Secretary of State shall notify the Secretary of the Treasury, who shall promptly remove such import prohibition.**

- (d) DEFINITIONS.—As used in this section—**

- (1) The term “fish” includes any highly migratory species.

- (2) The term “fish products” means any article which is produced from or composed of (in whole or in part) any fish.

SEC. 206. LARGE-SCALE DRIFTNET FISHING

16 U.S.C. 1826

- (a) SHORT TITLE.—This section incorporates and expands upon provisions of the Driftnet Impact Monitoring, Assessment, and Control Act of 1987 and may be cited as the ‘Driftnet Act Amendments of 1990’.**

- (b) FINDINGS.—The Congress finds that—**

- (1) the continued widespread use of large-scale driftnets beyond the exclusive economic zone of any nation is a destructive fishing practice that poses a threat to living marine resources of the world's oceans, including but not limited to the North and South Pacific Ocean and the Bering Sea;
 - (2) the use of large-scale driftnets is expanding into new regions of the world's oceans, including the Atlantic Ocean and Caribbean Sea;
 - (3) there is a pressing need for detailed and reliable information on the number of seabirds, sea turtles, nontarget fish, and marine mammals that become entangled and die in actively fished large-scale driftnets and in large-scale driftnets that are lost, abandoned, or discarded;
 - (4) increased efforts, including reliable observer data and enforcement mechanisms, are needed to monitor, assess, control, and reduce the adverse impact of large-scale driftnet fishing on living marine resources;
 - (5) the nations of the world have agreed in the United Nations, through General Assembly Resolution Numbered 44-225, approved December 22, 1989, by the General Assembly, that a moratorium should be imposed by June 30, 1992, on the use of large-scale driftnets beyond the exclusive economic zone of any nation;
 - (6) the nations of the South Pacific have agreed to a moratorium on the use of large-scale driftnets in the

South Pacific through the Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific, which was agreed to in Wellington, New Zealand, on November 29, 1989; and

- (7) increasing population pressures and new knowledge of the importance of living marine resources to the health of the global ecosystem demand that greater responsibility be exercised by persons fishing or developing new fisheries beyond the exclusive economic zone of any nation.

(c) POLICY.—It is declared to be the policy of the Congress in this section that the United States should—

- (1) implement the moratorium called for by the United Nations General Assembly in Resolution Numbered 44-225;
- (2) support the Tarawa Declaration and the Wellington Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific; and
- (3) secure a permanent ban on the use of destructive fishing practices, and in particular large-scale driftnets, by persons or vessels fishing beyond the exclusive economic zone of any nation.

(d) INTERNATIONAL AGREEMENTS.—The Secretary, through the Secretary of State and the Secretary of the department in which the Coast Guard is operating, shall seek to secure international agreements to implement immediately the findings, policy, and provisions of this section, and in particular an international ban on large-scale driftnet fishing. The Secretary, through the Secretary of State, shall include, in any agreement which addresses the taking of living marine resources of the United States, provisions to ensure that—

- (1) each large-scale driftnet fishing vessel of a foreign nation that is party to the agreement, including vessels that may operate independently to develop new fishing areas, which operate beyond the exclusive economic zone of any nation, is included in such agreement;
- (2) each large-scale driftnet fishing vessel of a foreign nation that is party to the agreement, which operates beyond the exclusive economic zone of any nation, is equipped with satellite transmitters which provide real-time position information accessible to the United States;
- (3) statistically reliable monitoring by the United States is carried out, through the use of on-board observers or through dedicated platforms provided by foreign nations that are parties to the agreement, of all target and nontarget fish species, marine mammals, sea turtles, and sea birds entangled or killed by large-scale driftnets used by fishing vessels of foreign nations that are parties to the agreement;
- (4) officials of the United States have the right to board and inspect for violations of the agreement any large-scale driftnet fishing vessels operating under the flag of a foreign nation that is party to the agreement at any time while such vessel is operating in designated areas beyond the exclusive economic zone of any nation;
- (5) all catch landed or transshipped at sea by large-scale driftnet fishing vessels of a foreign nation that is a party to the agreement, and which are operated beyond the exclusive economic zone of any nation, is reliably monitored and documented;
- (6) time and area restrictions are imposed on the use of large-scale driftnets in order to prevent interception of anadromous species;
- (7) all large-scale driftnets used are constructed, insofar as feasible, with biodegradable materials which break into segments that do not represent a threat to living marine resources;
- (8) all large-scale driftnets are marked at appropriate intervals in a manner that conclusively identifies the vessel and flag nation responsible for each such driftnet;
- (9) the taking of nontarget fish species, marine mammals, sea turtles, seabirds, and endangered species or other species protected by international agreements to which the United States is a party is minimized and does not pose a threat to existing fisheries or the long-term health of living marine resources; and
- (10) definitive steps are agreed upon to ensure that parties to the agreement comply with the spirit of other international agreements and resolutions concerning the use of large-scale driftnets beyond the exclu-

sive economic zone of any nation.

- (e) **REPORT.**—Not later than January 1, 1991, and every year thereafter until the purposes of this section are met, the Secretary, after consultation with the Secretary of State and the Secretary of the department in which the Coast Guard is operating, shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Merchant Marine and Fisheries of the House of Representatives a report—
- (1) describing the steps taken to carry out the provisions of this section, particularly subsection (c);
 - (2) evaluating the progress of those efforts, the impacts on living marine resources, including available observer data, and specifying plans for further action;
 - (3) containing a list and description of any new fisheries developed by nations that conduct, or authorize their nationals to conduct, large-scale driftnet fishing beyond the exclusive economic zone of any nation; and
 - (4) containing a list of the nations that conduct, or authorize their nationals to conduct, large-scale driftnet fishing beyond the exclusive economic zone of any nation in a manner that diminishes the effectiveness of or is inconsistent with any international agreement governing large-scale driftnet fishing to which the United States is a party or otherwise subscribes.
- (f) **CERTIFICATION.**—If at any time the Secretary, in consultation with the Secretary of State and the Secretary of the department in which the Coast Guard is operating, identifies any nation that warrants inclusion in the list described under subsection (e)(4), the Secretary shall certify that fact to the President. Such certification shall be deemed to be a certification for the purposes of section 8(a) of the Fishermen's Protective Act of 1967 (22 U.S.C. 1978(a)).
- (g) **EFFECT ON SOVEREIGN RIGHTS.**—This section shall not serve or be construed to expand or diminish the sovereign rights of the United States, as stated by Presidential Proclamation Numbered 5030, dated March 10, 1983, and reflected in this Act or other existing law.
- (h) **DEFINITION.**—As used in this section, the term “living marine resources” includes fish, marine mammals, sea turtles, and seabirds and other waterfowl.

HIGH SEAS DRIFTNET FISHERIES ENFORCEMENT ACT

SEC. 101.3 DENIAL OF PORT PRIVILEGES AND SANCTIONS FOR HIGH SEAS LARGE-SCALE DRIFTNET FISHING

16 U.S.C. 1826a

(a) DENIAL OF PORT PRIVILEGES.—

- (1) **PUBLICATION OF LIST.**—Not later than 30 days after November 2, 1992, and periodically thereafter, the Secretary of Commerce, in consultation with the Secretary of State, shall publish a list of nations whose nationals or vessels conduct large-scale driftnet fishing beyond the exclusive economic zone of any nation.
- (2) **DENIAL OF PORT PRIVILEGES.**—The Secretary of the Treasury shall, in accordance with recognized principles of international law—
 - (A) withhold or revoke the clearance required by section 91 of the Appendix to Title 46 for any large-scale driftnet fishing vessel that is documented under the laws of the United States or of a nation included on a list published under paragraph (1); and
 - (B) deny entry of that vessel to any place in the United States and to the navigable waters of the United States.
- (3) **NOTIFICATION OF NATION.**—Before the publication of a list of nations under paragraph (1), the Secretary of State shall notify each nation included on that list regarding—
 - (A) the effect of that publication on port privileges of vessels of that nation under paragraph (1); and
 - (B) any sanctions or requirements, under this Act or any other law, that may be imposed on that nation if nationals or vessels of that nation continue to conduct large-scale driftnet fishing beyond the exclusive economic zone of any nation after December 31, 1992.

(b) SANCTIONS.—

- (1) **IDENTIFICATIONS.**—
 - (A) **INITIAL IDENTIFICATIONS.**—Not later than January 10, 1993, the Secretary of Commerce shall—
 - (i) identify each nation whose nationals or vessels are conducting large-scale driftnet fishing or illegal, unreported, or unregulated fishing beyond the exclusive economic zone of any nation; and
 - (ii) notify the President and that nation of the identification under clause (i).
 - (B) **ADDITIONAL IDENTIFICATIONS.**—At any time after January 10, 1993, whenever the Secretary of Commerce has reason to believe that the nationals or vessels of any nation are conducting large-scale driftnet fishing or illegal, unreported, or unregulated fishing beyond the exclusive economic zone of any nation, the Secretary of Commerce shall—
 - (i) identify that nation; and
 - (ii) notify the President and that nation of the identification under clause (i).
- (2) **CONSULTATIONS.**—Not later than 30 days after a nation is identified under paragraph (1)(B), the President shall enter consultations with the government of that nation for the purpose of obtaining an agreement that will effect the immediate termination of large-scale driftnet fishing or illegal, unreported, or unregulated fishing by the nationals or vessels of that nation beyond the exclusive economic zone

of any nation.

(3) PROHIBITION ON IMPORTS OF FISH AND FISH PRODUCTS AND SPORT FISHING EQUIPMENT.—

(A) PROHIBITION.—The President—

- (i) upon receipt of notification of the identification of a nation under paragraph (1)(A); or
- (ii) if the consultations with the government of a nation under paragraph (2) are not satisfactorily concluded within 90 days,

shall direct the Secretary of the Treasury to prohibit the importation into the United States of fish and fish products and sport fishing equipment (as that term is defined in section 4162 of Title 26) from that nation.

(B) IMPLEMENTATION OF PROHIBITION.—With respect to an import prohibition directed under subparagraph (A), the Secretary of the Treasury shall implement such prohibition not later than the date that is 45 days after the date on which the Secretary has received the direction from the President.

(C) PUBLIC NOTICE OF PROHIBITION.—Before the effective date of any import prohibition under this paragraph, the Secretary of the Treasury shall provide public notice of the impending prohibition.

(4) ADDITIONAL ECONOMIC SANCTIONS.—

(A) DETERMINATION OF EFFECTIVENESS OF SANCTIONS.—Not later than six months after the date the Secretary of Commerce identifies a nation under paragraph (1), the Secretary shall determine whether—

- (i) any prohibition established under paragraph (3) is insufficient to cause that nation to terminate large-scale driftnet fishing or illegal, unreported, or unregulated fishing conducted by its nationals and vessels beyond the exclusive economic zone of any nation; or
- (ii) that nation has retaliated against the United States as a result of that prohibition.

(B) CERTIFICATION.—The Secretary of Commerce shall certify to the President each affirmative determination under subparagraph (A) with respect to a nation.

(C) EFFECT OF CERTIFICATION.—Certification by the Secretary of Commerce under subparagraph (B) is deemed to be a certification under section 1978(a) of Title 22, as amended by this Act.

SEC. 102.4 DURATION OF DENIAL OF PORT PRIVILEGES AND SANCTIONS

16 U.S.C. 1826b

Any denial of port privileges or sanction under section 101 with respect to a nation shall remain in effect until such time as the Secretary of Commerce certifies to the President and the Congress that such nation has terminated large-scale driftnet fishing or illegal, unreported, or unregulated fishing by its nationals and vessels beyond the exclusive economic zone of any nation.

SEC. 104. DEFINITIONS

16 U.S.C. 1826c

In this title [High Seas Driftnet Fisheries Enforcement Act], the following definitions apply:

- (1) FISH AND FISH PRODUCTS.—The term “fish and fish products” means any aquatic species (including marine mammals and plants) and all products thereof exported from a nation, whether or not taken by fishing vessels of that nation or packed, processed, or otherwise prepared for export in that nation or within the jurisdiction thereof.

- (2) LARGE-SCALE DRIFTNET FISHING.—
 - (A) IN GENERAL.—Except as provided in subparagraph (B), the term “large-scale driftnet fishing” means a method of fishing in which a gillnet composed of a panel or panels of webbing, or a series of such gillnets, with a total length of two and one-half kilometers or more is placed in the water and allowed to drift with the currents and winds for the purpose of entangling fish in the webbing.
 - (B) EXCEPTION.—Until January 1, 1994, the term “large-scale driftnet fishing” does not include the use in the northeast Atlantic Ocean of gillnets with a total length not to exceed five kilometers if the use is in accordance with regulations adopted by the European Community pursuant to the October 28, 1991, decision by the Council of Fisheries Ministers of the Community.
- (3) LARGE-SCALE DRIFTNET FISHING VESSEL.—The term “large-scale driftnet fishing vessel” means any vessel which is—
 - (A) used for, equipped to be used for, or of a type which is normally used for large-scale driftnet fishing; or
 - (B) used for aiding or assisting one or more vessels at sea in the performance of large-scale driftnet fishing, including preparation, supply, storage, refrigeration, transportation, or processing.

HIGH SEAS DRIFTNET FISHING MORATORIUM PROTECTION ACT 104-43

SEC. 603. PROHIBITION

The United States, or any agency or official acting on behalf of the United States, may not enter into any international agreement with respect to the conservation and management of living marine resources or the use of the high seas by fishing vessels that would prevent full implementation of the global moratorium on large-scale driftnet fishing on the high seas, as such moratorium is expressed in Resolution 46/215 of the United Nations General Assembly.

SEC. 604. NEGOTIATIONS

16 USC 1826e

The Secretary of State, on behalf of the United States, shall seek to enhance the implementation and effectiveness of the United Nations General Assembly resolutions and decisions regarding the moratorium on large-scale driftnet fishing on the high seas through appropriate international agreements and organizations.

SEC. 605. CERTIFICATION

16 USC 1826f

The Secretary of State shall determine in writing prior to the signing or provisional application by the United States of any international agreement with respect to the conservation and management of living marine resources or the use of the high seas by fishing vessels that the prohibition contained in section 603 will not be violated if such agreement is signed or provisionally applied.

SEC. 606. ENFORCEMENT

16 USC 1826g

The President shall utilize appropriate assets of the Department of Defense, the United States Coast Guard, and other Federal agencies to detect, monitor, and prevent violations of the United Nations moratorium on large-scale driftnet fishing on the high seas for all fisheries under the jurisdiction of the United States and, in the case of fisheries not under the jurisdiction of the United States, to the fullest extent permitted under international law.

SEC. 607. BIENNIAL REPORT ON INTERNATIONAL COMPLIANCE

16 USC 1826h

The Secretary, in consultation with the Secretary of State, shall provide to Congress, by not later than 2 years after the

date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, and every 2 years thereafter, a report that includes—

- (1) the state of knowledge on the status of international living marine resources shared by the United States or subject to treaties or agreements to which the United States is a party, including a list of all such fish stocks classified as **overfished depleted**, overexploited, depleted, endangered, or threatened with extinction by any international or other authority charged with management or conservation of living marine resources;
- (2) a list of nations whose vessels have been identified under section 609(a) or 610(a), including the specific offending activities and any subsequent actions taken pursuant to section 609 or 610;
- (3) a description of efforts taken by nations on those lists to comply [sic] take appropriate corrective action consistent with sections 609 and 610, and an evaluation of the progress of those efforts, including steps taken by the United States to implement those sections and to improve international compliance;
- (4) progress at the international level, consistent with section 608, to strengthen the efforts of international fishery management organizations to end illegal, unreported, or unregulated fishing; and
- (5) steps taken by the Secretary at the international level to adopt international measures comparable to those of the United States to reduce impacts of fishing and other practices on protected living marine resources, if no international agreement to achieve such goal exists, or if the relevant international fishery or conservation organization has failed to implement effective measures to end or reduce the adverse impacts of fishing practices on such species.

SEC. 608. ACTION TO STRENGTHEN INTERNATIONAL FISHERY MANAGEMENT ORGANIZATIONS

16 USC 1826i

The Secretary, in consultation with the Secretary of State, and in cooperation with relevant fishery management councils and any relevant advisory committees, shall take actions to improve the effectiveness of international fishery management organizations in conserving and managing fish stocks under their jurisdiction. These actions shall include—

- (1) urging international fishery management organizations to which the United States is a member—
 - (A) to incorporate multilateral market-related measures against member or nonmember governments whose vessels engage in illegal, unreported, or unregulated fishing;
 - (B) to seek adoption of lists that identify fishing vessels and vessel owners engaged in illegal, unreported, or unregulated fishing that can be shared among all members and other international fishery management organizations;
 - (C) to seek international adoption of a centralized vessel monitoring system in order to monitor and document capacity in fleets of all nations involved in fishing in areas under an international fishery management organization's jurisdiction;
 - (D) to increase use of observers and technologies needed to monitor compliance with conservation and management measures established by the organization, including vessel monitoring systems and automatic identification systems; and
 - (E) to seek adoption of stronger port state controls in all nations, particularly those nations in whose ports vessels engaged in illegal, unreported, or unregulated fishing land or transship fish;
- (2) urging international fishery management organizations to which the United States is a member, as well as all members of those organizations, to adopt and expand the use of market-related measures to combat illegal, unreported, or unregulated fishing, including—
 - (A) import prohibitions, landing restrictions, or other market-based measures needed to enforce compliance with international fishery management organization measures, such as quotas and catch limits;
 - (B) import restrictions or other market-based measures to prevent the trade or importation of fish

- caught by vessels identified multilaterally as engaging in illegal, unreported, or unregulated fishing; and
- (C) catch documentation and certification schemes to improve tracking and identification of catch of vessels engaged in illegal, unreported, or unregulated fishing, including advance transmission of catch documents to ports of entry; and
- (3) urging other nations at bilateral, regional, and international levels, including the Convention on International Trade in Endangered Species of Fauna and Flora and the World Trade Organization to take all steps necessary, consistent with international law, to adopt measures and policies that will prevent fish or other living marine resources harvested by vessels engaged in illegal, unreported, or unregulated fishing from being traded or imported into their nation or territories.

SEC. 609. ILLEGAL, UNREPORTED, OR UNREGULATED FISHING

16 USC 1826j

- (a) **IDENTIFICATION.**—The Secretary shall identify, and list in the report under section 607, a nation if fishing vessels of that nation are engaged, or have been engaged at any point during the preceding 2 years, in illegal, unreported, or unregulated fishing—
- (1) the relevant international fishery management organization has failed to implement effective measures to end the illegal, unreported, or unregulated fishing activity by vessels of that nation or the nation is not a party to, or does not maintain cooperating status with, such organization; or
- (2) where no international fishery management organization exists with a mandate to regulate the fishing activity in question.
- (b) **NOTIFICATION.**—An identification under subsection (a) or section 610(a) is deemed to be an identification under section 101(b)(1)(A) of the High Seas Driftnet Fisheries Enforcement Act (16 U.S.C. 1826a(b)(1)(A)), and the Secretary shall notify the President and that nation of such identification.
- (c) **CONSULTATION.**—No later than 60 days after submitting a report to Congress under section 607, the Secretary, acting through the Secretary of State, shall—
- (1) notify nations listed in the report of the requirements of this section;
- (2) initiate consultations for the purpose of encouraging such nations to take the appropriate corrective action with respect to the offending activities of their fishing vessels identified in the report; and
- (3) notify any relevant international fishery management organization of the actions taken by the United States under this section.
- (d) **IUU CERTIFICATION PROCEDURE.**—
- (1) **CERTIFICATION.**—The Secretary shall establish a procedure, consistent with the provisions of subchapter II of chapter of title 5, United States Code, for determining if a nation identified under subsection (a) and listed in the report under section 607 has taken appropriate corrective action with respect to the offending activities of its fishing vessels identified in the report under section 607. The certification procedure shall provide for notice and an opportunity for comment by any such nation. The Secretary shall determine, on the basis of the procedure, and certify to the Congress no later than 90 days after the date on which the Secretary promulgates a final rule containing the procedure, and biennially thereafter in the report under section 607—
- (A) whether the government of each nation identified under subsection (a) has provided documentary evidence that it has taken corrective action with respect to the offending activities of its fishing vessels identified in the report; or
- (B) whether the relevant international fishery management organization has implemented measures that are effective in ending the illegal, unreported, or unregulated fishing activity by vessels of

that nation.

- (2) ALTERNATIVE PROCEDURE.—The Secretary may establish a procedure for certification, on a shipment-by-shipment, shipper-by-shipper, or other basis of fish or fish products from a vessel of a harvesting nation not certified under paragraph (1) if the Secretary determines that—
 - (A) the vessel has not engaged in illegal, unreported, or unregulated fishing under an international fishery management agreement to which the United States is a party; or
 - (B) the vessel is not identified by an international fishery management organization as participating in illegal, unreported, or unregulated fishing activities.
- (3) EFFECT OF CERTIFICATION.—
 - (A) IN GENERAL.—The provisions of section 101(a) and section 101(b)(3) and (4) of this Act (16 U.S.C. 1826a(a), (b)(3), and (b)(4))—
 - (i) shall apply to any nation identified under subsection (a) that has not been certified by the Secretary under this subsection, or for which the Secretary has issued a negative certification under this subsection; but
 - (ii) shall not apply to any nation identified under subsection (a) for which the Secretary has issued a positive certification under this subsection.
 - (B) EXCEPTIONS.—Subparagraph (A)(i) does not apply—
 - (i) to the extent that such provisions would apply to sport fishing equipment or to fish or fish products not managed under the applicable international fishery agreement; or
 - (ii) if there is no applicable international fishery agreement, to the extent that such provisions would apply to fish or fish products caught by vessels not engaged in illegal, unreported, or unregulated fishing.

(e) ILLEGAL, UNREPORTED, OR UNREGULATED FISHING DEFINED.—

- (1) IN GENERAL.—In this Act the term ‘illegal, unreported, or unregulated fishing’ has the meaning established under paragraph (2).
- (2) SECRETARY TO DEFINE TERM WITHIN LEGISLATIVE GUIDELINES.— ~~Within 3 months after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, Not later than 3 months after the date of enactment of the Magnuson-Stevens Fishery Conservation and Mangement Reauthorization Act of 2014~~³⁷, the Secretary shall publish a definition of the term ‘illegal, unreported, or unregulated fishing’ for purposes of this Act.
- (3) GUIDELINES.—The Secretary shall include in the definition, at a minimum—
 - (A) fishing activities that violate conservation and management measures required under an international fishery management agreement to which the United States is a party, including catch limits or quotas, capacity restrictions, and bycatch reduction requirements;
 - (B) overfishing of fish stocks shared by the United States, for which there are no applicable international conservation or management measures or in areas with no applicable international fishery management organization or agreement, that has adverse impacts on such stocks; ~~and~~
 - (C) fishing activity that has an adverse impact on seamounts, hydrothermal vents, and cold water corals located beyond national jurisdiction, for which there are no applicable conservation or management measures or in areas with no applicable international fishery management organization or agreement, ~~and~~.
 - (D) ~~To the extent possible--~~

³⁷ Begich page 81 line 14-82 line 2

- (i) fishing activities conducted by foreign vessels in waters under the jurisdiction of a nation without permission of that nation; and
- (ii) fishing activities conducted by foreign vessels in contravention of a nation's laws, including fishing activity that has not been reported or that has been misreported to the relevant national authority of a nation in contravention of that nation's laws.³⁸

(f) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to the Secretary for fiscal years ~~2007 through 2013~~ **2015 through 2021**³⁹ such sums as are necessary to carry out this section.

SEC. 610. EQUIVALENT CONSERVATION MEASURES

16 USC 1826k

(a) **IDENTIFICATION.**—The Secretary shall identify, and list in the report under section 607, a nation if—

- (1) fishing vessels of that nation are engaged, or have been engaged during the preceding calendar year in fishing activities or practices;
 - (A) in waters beyond any national jurisdiction that result in bycatch of a protected living marine resource; or
 - (B) beyond the exclusive economic zone of the United States that result in bycatch of a protected living marine resource shared by the United States;
- (2) the relevant international organization for the conservation and protection of such resources or the relevant international or regional fishery organization has failed to implement effective measures to end or reduce such bycatch, or the nation is not a party to, or does not maintain cooperating status with, such organization; and
- (3) the nation has not adopted a regulatory program governing such fishing practices designed to end or reduce such bycatch that is comparable to that of the United States, taking into account different conditions.

(b) **CONSULTATION AND NEGOTIATION.**—The Secretary, acting through the Secretary of State, shall—

- (1) notify, as soon as possible, other nations whose vessels engage in fishing activities or practices described in subsection (a), about the provisions of this section and this Act;
- (2) initiate discussions as soon as possible with all foreign governments which are engaged in, or which have persons or companies engaged in, fishing activities or practices described in subsection (a), for the purpose of entering into bilateral and multilateral treaties with such countries to protect such species;
- (3) seek agreements calling for international restrictions on fishing activities or practices described in subsection (a) through the United Nations, the Food and Agriculture Organization's Committee on Fisheries, and appropriate international fishery management bodies; and
- (4) initiate the amendment of any existing international treaty for the protection and conservation of such species to which the United States is a party in order to make such treaty consistent with the purposes and policies of this section.

(c) **CONSERVATION CERTIFICATION PROCEDURE.**—

- (1) **DETERMINATION.**—The Secretary shall establish a procedure consistent with the provisions of subchapter II of chapter 5 of title 5, United States Code, for determining whether the government of a harvesting nation identified under subsection (a) and listed in the report under section 607—

³⁸ Begich page 82 lines 5-19. This seems in line with the Council and HMSAS's recommendations.

³⁹ Begich page 82 lines 20-25

- (A) has provided documentary evidence of the adoption of a regulatory program governing the conservation of the protected living marine resource that is comparable to that of the United States, taking into account different conditions, and which, in the case of pelagic longline fishing, includes mandatory use of circle hooks, careful handling and release equipment, and training and observer programs; and
 - (B) has established a management plan containing requirements that will assist in gathering species-specific data to support international stock assessments and conservation enforcement efforts for protected living marine resources.
- (2) **PROCEDURAL REQUIREMENT.**—The procedure established by the Secretary under paragraph (1) shall include notice and opportunity for comment by any such nation.
 - (3) **CERTIFICATION.**—The Secretary shall certify to the Congress by January 31, 2007, and biennially thereafter whether each such nation has provided the documentary evidence described in paragraph (1)(A) and established a management plan described in paragraph (1)(B).
 - (4) **ALTERNATIVE PROCEDURE.**—The Secretary shall establish a procedure for certification, on a shipment-by-shipment, shipper-by-shipper, or other basis of fish or fish products from a vessel of a harvesting nation not certified under paragraph (3) if the Secretary determines that such imports were harvested by practices that do not result in bycatch of a protected marine species, or were harvested by practices that—
 - (A) are comparable to those of the United States, taking into account different conditions, and which, in the case of pelagic longline fishing, includes mandatory use of circle hooks, careful handling and release equipment, and training and observer programs; and
 - (B) include the gathering of species specific data that can be used to support international and regional stock assessments and conservation efforts for protected living marine resources.
 - (5) **EFFECT OF CERTIFICATION.**—The provisions of section 101(a) and section 101(b)(3) and (4) of this Act (16 U.S.C. 1826a(a), (b)(3), and (b)(4)) (except to the extent that such provisions apply to sport fishing equipment or fish or fish products not caught by the vessels engaged in illegal, unreported, or unregulated fishing) shall apply to any nation identified under subsection (a) that has not been certified by the Secretary under this subsection, or for which the Secretary has issued a negative certification under this subsection, but shall not apply to any nation identified under subsection (a) for which the Secretary has issued a positive certification under this subsection.

(d) INTERNATIONAL COOPERATION AND ASSISTANCE.—To the greatest extent possible consistent with existing authority and the availability of funds, the Secretary shall—

- (1) provide appropriate assistance to nations identified by the Secretary under subsection (a) and international organizations of which those nations are members to assist those nations in qualifying for certification under subsection (c);
- (2) undertake, where appropriate, cooperative research activities on species statistics and improved harvesting techniques, with those nations or organizations;
- (3) encourage and facilitate the transfer of appropriate technology to those nations or organizations to assist those nations in qualifying for certification under subsection (c); and
- (4) provide assistance to those nations or organizations in designing and implementing appropriate fish harvesting plans.

(e) PROTECTED LIVING MARINE RESOURCE DEFINED.—In this section the term ‘protected living marine resource’—

- (1) means non-target fish, sea turtles, or marine mammals that are protected under United States law or international agreement, including the Marine Mammal Protection Act, the Endangered Species Act, the Shark Finning Prohibition Act, and the Convention on International Trade in Endangered Species

of Wild Flora and Fauna; but

- (2) does not include species, except sharks, managed under the Magnuson-Stevens Fishery Conservation and Management Act, the Atlantic Tunas Convention Act, or any international fishery management agreement.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary for fiscal years ~~2007 through 2013~~ **2015 through 2021**⁴⁰ such sums as are necessary to carry out this section.

P.L. 104-43, sec. 602 16 USC 1826d note.

FINDINGS.

The Congress finds that—

- (1) *Congress has enacted and the President has signed into law numerous Acts to control or prohibit large-scale driftnet fishing both within the jurisdiction of the United States and beyond the exclusive economic zone of any nation, including the Driftnet Impact Monitoring, Assessment, and Control Act of 1987 (title IV, Public Law 100-220), the Driftnet Act Amendments of 1990 (Public Law 101-627), and the High Seas Driftnet Fisheries Enforcement Act (title I, Public Law 102-582);*
- (2) *the United States is a party to the Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific, also known as the Wellington Convention;*
- (3) *the General Assembly of the United Nations has adopted three resolutions and three decisions which established and reaffirm a global moratorium on large-scale driftnet fishing on the high seas, beginning with Resolution 44/225 in 1989 and most recently in Decision 48/445 in 1993;*
- (4) *the General Assembly of the United Nations adopted these resolutions and decisions at the request of the United States and other concerned nations;*
- (5) *the best scientific information demonstrates the wastefulness and potentially destructive impacts of large-scale driftnet fishing on living marine resources and seabirds; and*
- (6) *Resolution 46/215 of the United Nations General Assembly calls on all nations, both individually and collectively, to prevent large-scale driftnet fishing on the high seas.*

SEC. 207. INTERNATIONAL MONITORING AND COMPLIANCE

16 U.S.C. 1829

(a) IN GENERAL.—The Secretary may undertake activities to promote improved monitoring and compliance for high seas fisheries, or fisheries governed by international fishery management agreements, and to implement the requirements of this title.

(b) SPECIFIC AUTHORITIES.—In carrying out subsection (a), the Secretary may—

- (1) share information on harvesting and processing capacity and illegal, unreported and unregulated fishing on the high seas, in areas covered by international fishery management agreements, and by vessels of other nations within the United States exclusive economic zone, with relevant law enforcement organizations of foreign nations and relevant international organizations;
- (2) further develop real time information sharing capabilities, particularly on harvesting and processing capacity and illegal, unreported and unregulated fishing;
- (3) participate in global and regional efforts to build an international network for monitoring, control, and surveillance of high seas fishing and fishing under regional or global agreements;
- (4) support efforts to create an international registry or database of fishing vessels, including by building on or enhancing registries developed by international fishery management organizations;

⁴⁰ *Begich page 83 lines 1-5*

- (5) enhance enforcement capabilities through the application of commercial or governmental remote sensing technology to locate or identify vessels engaged in illegal, unreported, or unregulated fishing on the high seas, including encroachments into the exclusive economic zone by fishing vessels of other nations;
- (6) provide technical or other assistance to developing countries to improve their monitoring, control, and surveillance capabilities; and
- (7) support coordinated international efforts to ensure that all large-scale fishing vessels operating on the high seas are required by their flag State to be fitted with vessel monitoring systems no later than December 31, 2008, or earlier if so decided by the relevant flag State or any relevant international fishery management organization.

TITLE III—NATIONAL FISHERY MANAGEMENT PROGRAM NATIONAL STANDARDS FOR FISHERY CONSERVATION AND MANAGEMENT

SEC.301. NATIONAL STANDARDS FOR FISHERY CONSERVATION AND MANAGEMENT

- (a) **IN GENERAL.**—Any fishery management plan prepared, and any regulation promulgated to implement any such plan, pursuant to this title shall be consistent with the following national standards for fishery conservation and management:
- (1) Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.
 - (2) Conservation and management measures shall be based upon the best scientific information available.
 - (3) To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.
 - (4) Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.
 - (5) Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.
 - (6) Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.
 - (7) Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.
 - (8) Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of **overfished depleted** stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of paragraph (2), in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.
 - (9) Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.
 - (10) Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.
- (c) **GUIDELINES.**—The Secretary shall establish advisory guidelines (which shall not have the force and effect of law), based on the national standards, to assist in the development of fishery management plans.
- (c) **INTER-SECTOR TRADING OF COMMERCIAL CATCH SHARE ALLOCATIONS IN THE GULF OF MEXICO.**—**Notwithstanding any other provision of this Act, any commercial fishing catch share allocation in a fishery in**

SEC. 302. REGIONAL FISHERY MANAGEMENT COUNCILS

16 U.S.C. 1852

(a) ESTABLISHMENT.—

- (1) There shall be established, within 120 days after the date of the enactment of this Act, eight Regional Fishery Management Councils, as follows:
 - (A) NEW ENGLAND COUNCIL.—The New England Fishery Management Council shall consist of the States of Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut and shall have authority over the fisheries in the Atlantic Ocean seaward of such States (except as provided in paragraph (3)). The New England Council shall have ~~17~~ 1 voting members, including 11 appointed by the Secretary in accordance with subsection (b)(2) (at least one of whom shall be appointed from each such State) and a liaison who is a member of the Mid-Atlantic Fishery Management Council to represent the interests of fisheries under the jurisdiction of such Council.
 - (B) MID-ATLANTIC COUNCIL.—The Mid-Atlantic Fishery Management Council shall consist of the States of ~~Rhode Island~~⁴², New York, New Jersey, Delaware, Pennsylvania, Maryland, Virginia, and North Carolina and shall have authority over the fisheries in the Atlantic Ocean seaward of such States (except North Carolina, ~~Rhode Island~~ and as provided in paragraph (3)). The Mid-Atlantic Council shall have ~~21~~ 22 23 voting members, including ~~13~~ 14 appointed by the Secretary in accordance with subsection (b)(2) (at least one of whom shall be appointed from each such State) and a liaison who is a member of the New England Fishery Management Council to represent the interests of fisheries under the jurisdiction of such Council.⁴³
 - (C) SOUTH ATLANTIC COUNCIL.—The South Atlantic Fishery Management Council shall consist of the States of North Carolina, South Carolina, Georgia, and Florida and shall have authority over the fisheries in the Atlantic Ocean seaward of such States (except as provided in paragraph (3)). The South Atlantic Council shall have 13 voting members, including 8 appointed by the Secretary in accordance with subsection (b)(2) (at least one of whom shall be appointed from each such State).
 - (D) CARIBBEAN COUNCIL.—The Caribbean Fishery Management Council shall consist of the Virgin Islands and the Commonwealth of Puerto Rico and shall have authority over the fisheries in the Caribbean Sea and Atlantic Ocean seaward of such States and of commonwealths, territories, and possessions of the United States in the Caribbean Sea (except as provided in paragraph (3)). The Caribbean Council shall have 7 voting members, including 4 appointed by the Secretary in accordance with subsection (b)(2) (at least one of whom shall be appointed from each such State).
 - (E) GULF COUNCIL.—The Gulf of Mexico Fishery Management Council shall consist of the States of Texas, Louisiana, Mississippi, Alabama, and Florida and shall have authority over the fisheries in the Gulf of Mexico seaward of such States (except as provided in paragraph (3)). The Gulf Council shall have 17 voting members, including 11 appointed by the Secretary in accordance with subsection (b)(2) (at least one of whom shall be appointed from each such State).
 - (F) PACIFIC COUNCIL.—The Pacific Fishery Management Council shall consist of the States of California, Oregon, Washington, and Idaho and shall have authority over the fisheries in the Pacific Ocean seaward of such States. The Pacific Council shall have 14 voting members, including 8 appointed by the Secretary in accordance with subsection (b)(2) (at least one of whom shall be

41 Amendment by Rep. Southerland of Florida during committee markup on 5/29/14.

42 Begich page 13-14 (all). No effect on PFMC

43 All House changes on this page from HR 4742 page 32. No effect on PFMC

appointed from each such State), and including one appointed from an Indian tribe with federally recognized fishing rights from California, Oregon, Washington, or Idaho in accordance with subsection (b)(5).

- (G) NORTH PACIFIC COUNCIL.—The North Pacific Fishery Management Council shall consist of the States of Alaska, Washington, and Oregon and shall have authority over the fisheries in the Arctic Ocean, Bering Sea, and Pacific Ocean seaward of Alaska. The North Pacific Council shall have 11 voting members, including 7 appointed by the Secretary in accordance with subsection (b)(2) (5 of whom shall be appointed from the State of Alaska and 2 of whom shall be appointed from the State of Washington).
- (H) WESTERN PACIFIC COUNCIL.—The Western Pacific Fishery Management Council shall consist of the States of Hawaii, American Samoa, Guam, and the Northern Mariana Islands and shall have authority over the fisheries in the Pacific Ocean seaward of such States and of the Commonwealths, territories, and possessions of the United States in the Pacific Ocean area. The Western Pacific Council shall have 13 voting members, including 8 appointed by the Secretary in accordance with subsection (b)(2) (at least one of whom shall be appointed from each of the following States: Hawaii, American Samoa, Guam, and the Northern Mariana Islands).
- (2) Each Council shall reflect the expertise and interest of the several constituent States in the ocean area over which such Council is granted authority.
- (3) The Secretary shall have authority over any highly migratory species fishery that is within the geographical area of authority of more than one of the following Councils: New England Council, Mid-Atlantic Council, South Atlantic Council, Gulf Council, and Caribbean Council.

(b) VOTING MEMBERS.—

- (1) The voting members of each Council shall be:
 - (A) The principal State official with marine fishery management responsibility and expertise in each constituent State, who is designated as such by the Governor of the State, so long as the official continues to hold such position, or the designee of such official.
 - (B) The regional director of the National Marine Fisheries Service for the geographic area concerned, or his designee, except that if two such directors are within such geographical area, the Secretary shall designate which of such directors shall be the voting member.
 - (C) The members required to be appointed by the Secretary in accordance with paragraphs (2) and (5).
- (2)
 - (A) The members of each Council required to be appointed by the Secretary must be individuals who, by reason of their occupational or other experience, scientific expertise, or training, are knowledgeable regarding the conservation and management,

BEGICH: ~~or the commercial or recreational harvest~~, ~~or the commercial, recreational, or subsistence fishing harvest~~⁴⁴

HOUSE: ~~or the commercial, recreational, or subsistence fishing~~⁴⁵

of the fishery resources of the geographical area concerned. Within nine months after the date of enactment of the Fishery Conservation Amendments of 1990, the Secretary shall, by regulation, prescribe criteria for determining whether an individual satisfies the requirements of this subparagraph.

44 Begich page 13 lines 6-9

45 Amendment made by Rep. Young of Alaska at markup held on 5/29/14

- (B) The Secretary, in making appointments under this section, shall, to the extent practicable, ensure a fair and balanced apportionment, on a rotating or other basis, of the active participants (or their representatives) in the commercial and recreational fisheries under the jurisdiction of the Council. On January 31, 1991, and each year thereafter, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Merchant Marine and Fisheries of the House of Representatives a report on the actions taken by the Secretary to ensure that such fair and balanced apportionment is achieved. The report shall—
- (i) list the fisheries under the jurisdiction of each Council, outlining for each fishery the type and quantity of fish harvested, fishing and processing methods employed, the number of participants, the duration and range of the fishery, and other distinguishing characteristics;
 - (ii) assess the membership of each Council in terms of the apportionment of the active participants in each such fishery; and
 - (iii) state the Secretary's plans and schedule for actions to achieve a fair and balanced apportionment on the Council for the active participants in any such fishery.
- (C) The Secretary shall appoint the members of each Council from a list of individuals submitted by the Governor of each applicable constituent State. A Governor may not submit the names of individuals to the Secretary for appointment unless the Governor has determined that each such individual is qualified under the requirements of subparagraph (A) and unless the Governor has, to the extent practicable, first consulted with representatives of the commercial and recreational fishing interests of the State, **and in the case of the Governor of Alaska with the subsistence fishing interests of the State**⁴⁶, regarding those individuals. Each such list shall include the names and pertinent biographical data of not less than three individuals for each applicable vacancy and shall be accompanied by a statement by the Governor explaining how each such individual meets the requirements of subparagraph (A). The Secretary shall review each list submitted by a Governor to ascertain if the individuals on the list are qualified for the vacancy on the basis of such requirements. If the Secretary determines that any individual is not qualified, the Secretary shall notify the appropriate Governor of that determination. The Governor shall then submit a revised list or resubmit the original list with an additional explanation of the qualifications of the individual in question. An individual is not eligible for appointment by the Secretary until that individual complies with the applicable financial disclosure requirements under subsection (k).
- (D)
- (i) The Governor of a State submitting a list of names of individuals for appointment by the Secretary of Commerce to the Gulf of Mexico **Fisheries Fishery** Management Council **or the South Atlantic Fishery Management Council**⁴⁷ under subparagraph (C) shall include—
 - (I) at least 1 nominee each from the commercial, recreational, and charter fishing sectors; and
 - (II) at least 1 other individual who is knowledgeable regarding the conservation and management of fisheries resources in the jurisdiction of the Council.
 - (ii) Notwithstanding the requirements of subparagraph (C), if the Secretary determines that the list of names submitted by the Governor does not meet the requirements of clause (i) the Secretary shall—
 - (I) publish a notice in the Federal Register asking the residents of that State to submit the names and pertinent biographical data of individuals who would meet the requirement not met for appointment to the Council; and

⁴⁶ Amendment made by Rep. Young of Alaska at markup held on 5/29/14

⁴⁷ Begich page 13. No effect on PFMC

- (II) add the name of any qualified individual submitted by the public who meets the unmet requirement to the list of names submitted by the Governor.
 - (iii) For purposes of clause (i) an individual who owns or operates a fish farm outside of the United States shall not be considered to be a representative of the commercial or recreational fishing sector.
 - ~~(iv) The requirements of this subparagraph shall expire at the end of fiscal year 2012.~~
- (E) Whenever the Secretary makes an appointment to a Council, the Secretary shall make a public announcement of such appointment not less than 45 days before the first day on which the individual is to take office as a member of the Council.
- (3) Each voting member appointed to a Council by the Secretary in accordance with paragraphs (2) and (5) shall serve for a term of 3 years; except that the Secretary may designate a shorter term if necessary to provide for balanced expiration to terms of office. No member appointed after January 1, 1986, may serve more than three consecutive terms. Any term in which an individual was appointed to replace a member who left office during the term shall not be counted in determining the number of consecutive terms served by that Council member.
- (4) Successors to the voting members of any Council shall be appointed in the same manner as the original voting members. Any individual appointed to fill a vacancy occurring prior to the expiration of any term of office shall be appointed for the remainder of that term.
- (5)
 - (A) The Secretary shall appoint to the Pacific Council one representative of an Indian tribe with Federally recognized fishing rights from California, Oregon, Washington, or Idaho from a list of not less than 3 individuals submitted by the tribal governments. The Secretary, in consultation with the Secretary of the Interior and tribal governments, shall establish by regulation the procedure for submitting a list under this subparagraph.
 - (B) Representation shall be rotated among the tribes taking into consideration—
 - (i) the qualifications of the individuals on the list referred to in subparagraph (A),
 - (ii) the various rights of the Indian tribes involved and judicial cases that set forth how those rights are to be exercised, and
 - (iii) the geographic area in which the tribe of the representative is located.
 - (C) A vacancy occurring prior to the expiration of any term shall be filled in the same manner as set out in subparagraphs (A) and (B), except that the Secretary may use the list from which the vacating representative was chosen.
 - (D) The tribal representative appointed under subparagraph (A) may designate as an alternate, during the period of the representative's term, an individual knowledgeable concerning tribal rights, tribal law, and the fishery resources of the geographical area concerned.
- (6) The Secretary may remove for cause any member of a Council required to be appointed by the Secretary in accordance with paragraphs (2) or (5) if—
 - (A) the Council concerned first recommends removal by not less than two-thirds of the members who are voting members and submits such removal recommendation to the Secretary in writing together with a statement of the basis for the recommendation; or
 - (B) the member is found by the Secretary, after notice and an opportunity for a hearing in accordance with section 554 of title 5, United States Code, to have committed an act prohibited by section 307(1)(O).

(c) NONVOTING MEMBERS.—

- (1) The nonvoting members of each Council shall be:

- (A) The regional or area director of the United States Fish and Wildlife Service for the geographical area concerned, or his designee.
 - (B) The commander of the Coast Guard district for the geographical area concerned, or his designee; except that, if two Coast Guard districts are within such geographical area, the commander designated for such purpose by the commandant of the Coast Guard.
 - (C) The Executive Director of the Marine Fisheries Commission for the geographical area concerned, if any, or his designee.
 - (D) One representative of the Department of State designated for such purpose by the Secretary of State, or his designee.
- (2) The Pacific Council shall have one additional nonvoting member who shall be appointed by, and serve at the pleasure of, the Governor of Alaska.

(d) COMPENSATION AND EXPENSES.—The voting members of each Council who are required to be appointed by the Secretary and who are not employed by the Federal Government or any State or local government, shall receive compensation at the daily rate for GS-15, step 7 of the General Schedule, when engaged in the actual performance of duties for such Council. The voting members of each Council, any nonvoting member described in subsection (c)(1)(C), and the nonvoting member appointed pursuant to subsection (c)(2) shall be reimbursed for actual expenses incurred in the performance of such duties, and other non-voting members and Council staff members may be reimbursed for actual expenses.

(e) TRANSACTION OF BUSINESS.—

- (1) A majority of the voting members of any Council shall constitute a quorum, but one or more such members designated by the Council may hold hearings. All decisions of any Council shall be by majority vote of the voting members present and voting.
- (2) The voting members of each Council shall select a Chairman for such Council from among the voting members.
- (3) Each Council shall meet at appropriate times and places in any of the constituent States of the Council at the call of the Chairman or upon the request of a majority of its voting members.
- (4) If any voting member of a Council disagrees with respect to any matter which is transmitted to the Secretary by such Council, such member may submit a statement to the Secretary setting forth the reasons for such disagreement. The regional director of the National Marine Fisheries Service serving on the Council, or the regional director's designee, shall submit such a statement, which shall be made available to the public upon request, if the regional director disagrees with any such matter.
- (5) At the request of any voting member of a Council, the Council shall hold a roll call vote on any matter before the Council. The official minutes and other appropriate records of any Council meeting shall identify all roll call votes held, the name of each voting member present during each roll call vote, and how each member voted on each roll call vote.

(f) STAFF AND ADMINISTRATION.—

- (1) Each Council may appoint, and assign duties to, an executive director and such other full- and part-time administrative employees as the Secretary determines are necessary to the performance of its functions.
- (2) Upon the request of any Council, and after consultation with the Secretary, the head of any Federal agency is authorized to detail to such Council, on a reimbursable basis, any of the personnel of such agency, to assist such Council in the performance of its functions under this Act.
- (3) The Secretary shall provide to each Council such administrative and technical support services as are necessary for the effective functioning of such Council.
- (4) The Administrator of General Services shall furnish each Council with such offices, equipment, sup-

plies, and services as he is authorized to furnish to any other agency or instrumentality of the United States.

- (5) The Secretary and the Secretary of State shall furnish each Council with relevant information concerning foreign fishing and international fishery agreements.
- (6) Each Council shall determine its organization, and prescribe its practices and procedures for carrying out its functions under this Act, in accordance with such uniform standards as are prescribed by the Secretary. The procedures of a Council, and of its scientific and statistical committee and advisory panels established under subsection (g), must be consistent with the procedural guidelines set forth in subsection [i](2). Each Council shall publish and make available to the public a statement of its organization, practices, and procedures.
- (7) The Secretary shall pay—
 - (A) the compensation and expenses provided for in subsection (d);
 - (B) appropriate compensation to employees appointed under paragraph (1);
 - (C) the amounts required for reimbursement of other Federal agencies under paragraphs (2) and (4);
 - (D) the actual expenses of the members of the committees and panels established under subsection (g); and
 - (E) such other costs as the Secretary determines are necessary to the performance of the functions of the Councils.

(g) COMMITTEES AND ADVISORY PANELS.—

(1)

- (A) Each Council shall establish, maintain, and appoint the members of a scientific and statistical committee to assist it in the development, collection, evaluation, and peer review of such statistical, biological, economic, social, and other scientific information as is relevant to such Council's development and amendment of any fishery management plan.

(B) Each scientific and statistical committee shall—

- (i) provide its Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, achieving rebuilding targets, goals and objectives of fishery ecosystem plans developed under the discretionary authority provided under section 303B, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures, and sustainability of fishing practices;⁴⁸
 - (ii) develop a control rule to derive annual recommendations for acceptable biological catch for a forage fishery which account for the importance of forage species to managed fish throughout their range and provide a minimum reference point to determine when a forage fishery should close; and
 - (iii) carry out the requirements of this subparagraph in a transparent manner, allowing for public involvement in the process.⁴⁹
- (B) ~~[Begich deletes this paragraph and replaces it with the text above]~~. Each scientific and statistical committee shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, and achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures, and sustainability of

48 Begich page 14. Our SSC already does these things.

49 Begich page 14-15 lines 5-6.

fishing practices. Each scientific and statistical committee shall develop such advice in a transparent manner and allow for public involvement in the process⁵⁰.

- (C) Members appointed by the Councils to the scientific and statistical committees shall be Federal employees, State employees, academicians, or independent experts and shall have strong scientific or technical credentials and experience.
 - (D) Each member of a scientific and statistical committee shall be treated as an affected individual for purposes of paragraphs (2), (3)(B), (4), and (5)(A) of subsection (j). The Secretary shall keep disclosures made pursuant to this subparagraph on file.
 - (E) The Secretary and each Council may establish a peer review process for that Council for scientific information used to advise the Council about the conservation and management of the fishery. The review process, which may include existing committees or panels, is deemed to satisfy the requirements of the guidelines issued pursuant to section 515 of the Treasury and General Government Appropriations Act for Fiscal year 2001 (Public Law 106–554—Appendix C; 114 Stat. 2763A–153).
 - (F) In addition to the provisions of section 302(f)(7), the Secretary shall, subject to the availability of appropriations, pay a stipend to members of the scientific and statistical committees or advisory panels who are not employed by the Federal Government or a State marine fisheries agency.
 - (G) A science and statistical committee shall hold its meetings in conjunction with the meeting of the Council, to the extent practicable.
- (2) Each Council shall establish such advisory panels as are necessary or appropriate to assist it in carrying out its functions under this Act.
 - (3)
 - (A) Each Council shall establish and maintain a fishing industry advisory committee which shall provide information and recommendations on, and assist in the development of, fishery management plans and amendments to such plans.
 - (B) Appointments to a committee established under subparagraph (A) shall be made by each Council in such a manner as to provide fair representation to commercial fishing interests in the geographical area of authority of the Council.
 - (4) The Secretary shall establish advisory panels to assist in the collection and evaluation of information relevant to the development of any fishery management plan or plan amendment for a fishery to which subsection (a)(3) applies. Each advisory panel shall participate in all aspects of the development of the plan or amendment; be balanced in its representation of commercial, recreational, and other interests; and consist of not less than 7 individuals who are knowledgeable about the fishery for which the plan or amendment is developed, selected from among—
 - (A) members of advisory committees and species working groups appointed under Acts implementing relevant international fishery agreements pertaining to highly migratory species; and
 - (B) other interested persons.
 - (5) Decisions and recommendations made by committees and panels established under this subsection shall be considered to be advisory in nature.

(h) FUNCTIONS.—Each Council shall, in accordance with the provisions of this Act—

- (1) for each fishery under its authority that requires conservation and management, prepare and submit to the Secretary (A) a fishery management plan, and (B) amendments to each such plan that are necessary from time to time (and promptly whenever changes in conservation and management measures in another fishery substantially affect the fishery for which such plan was developed);

⁵⁰ HR 4742 page 10 lines 11-15. Our SSC already does this.

- (2) review any allocation of fishing privileges among sectors of a mixed-use fishery under a fishery management plan prepared by that Council not less often than once every 5 years, except a Council may delay action for not more than 3 additional 1-year periods;⁵¹
- (2 3) prepare comments on any application for foreign fishing transmitted to it under section 204(b)(4)(C) or section 204(d), and any fishery management plan or amendment transmitted to it under section 304(c)(4);
- (3 4) conduct public hearings, at appropriate times and in appropriate locations in the geographical area concerned, so as to allow all interested persons an opportunity to be heard in the development of fishery management plans and amendments to such plans, and with respect to the administration and implementation of the provisions of this Act (and for purposes of this paragraph, the term “geographical area concerned” may include an area under the authority of another Council if the fish in the fishery concerned migrate into, or occur in, that area or if the matters being heard affect fishermen of that area; but not unless such other Council is first consulted regarding the conduct of such hearings within its area);
- (4 5) submit to the Secretary such periodic reports as the Council deems appropriate, and any other relevant report which may be requested by the Secretary;
- (5 6) review on a continuing basis, and revise as appropriate, the assessments and specifications made pursuant to section 303(a)(3) and (4) with respect to the optimum yield from, the capacity and extent to which United States fish processors will process United States harvested fish from, and the total allowable level of foreign fishing in, each fishery (except as provided in section subsection (a)(3)) within its geographical area of authority;
- (6 7) develop annual catch limits for each of its managed fisheries that may not exceed the fishing level recommendations of its scientific and statistical committee or the peer review process established under subsection (g);
- (7) develop, in conjunction with the scientific and statistical committee, multi-year research priorities for fisheries, fisheries interactions, habitats, and other areas of research that are necessary for management purposes, that shall—
 - (A) establish priorities for 5-year periods;
 - (B) be updated as necessary; and
 - (C) be submitted to the Secretary and the regional science centers of the National Marine Fisheries Service for their consideration in developing research priorities and budgets for the region of the Council; ~~and~~
- (9) have the authority to use alternative fishery management measures in a recreational fishery (or the recreational component of a mixed-use fishery), including extraction rates, fishing mortality, and harvest control rules, to the extent they are in accordance with the requirements of this section; and⁵²
- (8-10) conduct any other activities which are required by, or provided for in, this Act or which are necessary and appropriate to the foregoing functions.

(i) PROCEDURAL MATTERS.—

- (1) The Federal Advisory Committee Act (5 U.S.C. App. 2) shall not apply to the Councils, the Council coordination committee established under subsection (l), or to the scientific and statistical committees or other committees or advisory panels established under subsection (g).
- (2) The following guidelines apply with respect to the conduct of business at meetings of a Council, of the Council coordination committee established under subsection (l), and of the scientific and statistical committees or other committees or advisory panels established under subsection (g):

51 Begich page 15 lines 17-22. A new requirement to review allocations at least every 8 years.

52 Begich page 16 lines 1-7. Provides more flexibility in managing recreational fisheries.

- (A) Unless closed in accordance with paragraph (3), each regular meeting and each emergency meeting shall be open to the public.
- (B) Emergency meetings shall be held at the call of the chairman or equivalent presiding officer.
- (C) Timely public notice of each regular meeting and each emergency meeting, including the time, place, and agenda of the meeting, shall be provided by any means that will result in wide publicity in the major fishing ports of the region (and in other major fishing ports having a direct interest in the affected fishery), except that e-mail notification and website postings alone are not sufficient. Timely notice of each regular meeting shall also be published in the Federal Register. The published agenda of the meeting may not be modified to include additional matters for Council action without public notice or within 14 days prior to the meeting date, unless such modification is to address an emergency action under section 305(c), in which case public notice shall be given immediately.
- (D) Interested persons shall be permitted to present oral or written statements regarding the matters on the agenda at meetings. All written information submitted to a Council by an interested person shall include a statement of the source and date of such information. Any oral or written statement shall include a brief description of the background and interests of the person in the subject of the oral or written statement.
- (E) Detailed minutes of each meeting of the Council, except for any closed session, shall be kept and shall contain a record of the persons present, a complete and accurate description of matters discussed and conclusions reached, and copies of all statements filed. The Chairman shall certify the accuracy of the minutes of each such meeting and submit a copy thereof to the Secretary. The minutes shall be made available to any court of competent jurisdiction.
- (F) Subject to the procedures established under paragraph (4), and the guidelines prescribed by the Secretary under section 402(b), relating to confidentiality, the administrative record, including minutes required under subparagraph (E), of each meeting, and records or other documents which were made available to or prepared for or by the Council, committee, or panel incident to the meeting, shall be available for public inspection and copying at a single location in the offices of the Council or the Secretary, as appropriate.
- (G) Unless closed in accordance with paragraph (3), each Council shall, where practicable, make available on the Internet website of the Council a video or audio webcast of each meeting of the Council and each meeting of the science and statistical committee of the Council not later than 30 days after the date of the conclusion of such meeting.⁵³
- (G) Each Council shall make available on the Internet Web site of the Council—
 - (i) to the extent practicable, a Webcast, an audio recording, or a live broadcast of each meeting of the Council, and of the Council Coordination Committee established under subsection (I), that is not closed in accordance with paragraph (3); and⁵⁴
 - (ii) audio, video (if the meeting was in person or by video conference), or a searchable audio or written transcript of each meeting of the Council and of the meetings of committees referred to in section 302(g)(1)(B) of the Council by not later than 30 days after the conclusion of the meeting.
- (H) The Secretary shall maintain and make available to the public an archive of Council and scientific and statistical committee meeting audios, videos, and transcripts made available under clauses (i) and (ii) subparagraph (G).⁵⁵

53 *Begich page 16 lines 11-18. Requires less than the Hastings draft, but still requires (at the least) an audio broadcast of the SSC meeting on top of what the Council already does.*

54 *Change from discussion draft. Allows audio recording/webcast instead of just live broadcast.*

55 *Change from discussion draft. Allows “searchable audio or written transcript” rather than complete writ-*

(A)

(3)

(A) Each Council, the Council Coordination Committee established under subsection (l), scientific and statistical committee, other committees, and advisory panel—

- (i) shall close any meeting, or portion thereof, that concerns matters or information that bears a national security classification; and
- (ii) may close any meeting, or portion thereof, that concerns matters or information that pertains to national security, employment matters, or briefings on litigation in which the Council is interested; and

(B) If any meeting or portion is closed, the Council concerned shall provide notice by any means that will result in wide publicity in the major fishing ports of the region (and in other major fishing ports having a direct interest in the affected fishery), except that e-mail notification and website postings alone are not sufficient, including in that notification the time and place of the meeting. This subparagraph does not require notification regarding any brief closure of a portion of a meeting in order to discuss employment or other internal administrative matters. Subparagraphs (D) and (F) of paragraph (2) shall not apply to any meeting or portion thereof that is so closed.

- (4) Each Council shall establish appropriate procedures applicable to it and to its committee and advisory panels for ensuring confidentiality of the statistics that may be submitted to it by Federal, [State, or tribal authorities](#)⁵⁶ ~~or State authorities~~, and may be voluntarily submitted to it by private persons; including, but not limited to, procedures for the restriction of Council employee access and the prevention of conflicts of interest; except that such procedures, in the case of statistics submitted to the Council by a State or by the Secretary under section 402(b), must be consistent with the laws and regulations of that State, or with the procedures of the Secretary, as the case may be, concerning the confidentiality of the statistics.
- (5) Each Council shall specify those procedures that are necessary or appropriate to ensure that the committees and advisory panels established under subsection (g) are involved, on a continuing basis, in the development and amendment of fishery management plans.
- (6) At any time when a Council determines it appropriate to consider new information from a State or Federal agency, [tribal government](#), or from a Council advisory body, the Council shall give comparable consideration to new information offered at that time by interested members of the public. Interested parties shall have a reasonable opportunity to respond to new data or information before the Council takes final action on conservation and management measures.

(j) DISCLOSURE OF FINANCIAL INTEREST AND RECUSAL.—

(1) For the purposes of this subsection—

(A) the term “affected individual” means an individual who—

- (i) is nominated by the Governor of a State for appointment as a voting member of a Council in accordance with subsection (b)(2); or
- (ii) is a voting member of a Council appointed—

(I) under subsection (b)(2); or

(II) under subsection (b)(5) who is not subject to disclosure and recusal requirements under the laws of an Indian tribal government; and

ten transcripts; 302(g)(1)(B) refers to SSC. HR 4742 page 10-11 lines 16-12. The Pacific Council already provides live broadcasts of each Council meeting and does not support additional requirements.

- (B) the term “designated official” means a person with expertise in Federal conflict-of-interest requirements who is designated by the Secretary, in consultation with the Council, to attend Council meetings and make determinations under paragraph (7)(B).
- (2) Each affected individual must disclose any financial interest held by—
 - (A) that individual;
 - (B) the spouse, minor child, or partner of that individual; and
 - (C) any organization (other than the Council) in which that individual is serving as an officer, director, trustee, partner, or employee; in any harvesting, processing, lobbying, advocacy, or marketing activity that is being, or will be, undertaken within any fishery over which the Council concerned has jurisdiction, or with respect to an individual or organization with a financial interest in such activity.
 - (3) The disclosure required under paragraph (2) shall be made—
 - (A) in the case of an affected individual referred to in paragraph (1)(A)(i), before appointment by the Secretary; and
 - (B) in the case of an affected individual referred to in paragraph (1)(A)(ii), within 45 days of taking office.
 - (4) An affected individual referred to in paragraph (1)(A)(ii) must update his or her disclosure form at any time any such financial interest is acquired, or substantially changed, by any person referred to in paragraph (2)(A), (B), or (C).
 - (5) The financial interest disclosures required by this subsection shall—
 - (A) be made on such forms, in accordance with such procedures, and at such times, as the Secretary shall by regulation prescribe;
 - (B) be kept on file by the Council and made available on the Internet and for public inspection at the Council offices during reasonable hours; and
 - (C) be kept on file by the Secretary for use in reviewing determinations under paragraph 7(B) and made available for public inspection at reasonable hours.
 - (6) The participation by an affected individual referred to in paragraph (1)(A)(ii) in an action by a Council during any time in which that individual is not in compliance with the regulations prescribed under paragraph (5) may not be treated as cause for the invalidation of that action.
 - (7)
 - (A) After the effective date of regulations promulgated under subparagraph (F) of this paragraph, an affected individual required to disclose a financial interest under paragraph (2) shall not vote on a Council decision which would have a significant and predictable effect on such financial interest. A Council decision shall be considered to have a significant and predictable effect on a financial interest if there is a close causal link between the Council decision and an expected and substantially disproportionate benefit to the financial interest of the affected individual relative to the financial interests of other participants in the same gear type or sector of the fishery. An affected individual who may not vote may participate in Council deliberations relating to the decision after notifying the Council of the voting recusal and identifying the financial interest that would be affected.
 - (B) At the request of an affected individual, or upon the initiative of the appropriate designated official, the designated official shall make a determination for the record whether a Council decision would have a significant and predictable effect on a financial interest.
 - (C) Any Council member may submit a written request to the Secretary to review any determination by the designated official under subparagraph (B) within 10 days of such determination. Such review shall be completed within 30 days of receipt of the request.

- (D) Any affected individual who does not vote in a Council decision in accordance with this subsection may state for the record how he or she would have voted on such decision if he or she had voted.
 - (E) If the Council makes a decision before the Secretary has reviewed a determination under subparagraph (C), the eventual ruling may not be treated as cause for the invalidation or reconsideration by the Secretary of such decision.
 - (F) The Secretary, in consultation with the Councils and by not later than one year from the date of enactment of the Sustainable Fisheries Act, shall promulgate regulations which prohibit an affected individual from voting in accordance with subparagraph (A), and which allow for the making of determinations under subparagraphs (B) and (C).
- (8) Section 208 of title 18, United States Code, does not apply to an affected individual referred to in paragraph (1)(A)(ii) during any time in which that individual is in compliance with the regulations prescribed under paragraph (5).
 - (9) On January 1, 2008, and annually thereafter, the Secretary shall submit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Resources on action taken by the Secretary and the Councils to implement the disclosure of financial interest and recusal requirements of this subsection, including identification of any conflict of interest problems with respect to the Councils and scientific and statistical committees and recommendations for addressing any such problems.

(k) COUNCIL TRAINING PROGRAM.—

- (1) TRAINING COURSE.—~~Within 6 months after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the~~ The⁵⁷ Secretary, in consultation with the Councils and the National Sea Grant College Program, shall develop a training course for newly appointed Council members. The course may cover a variety of topics relevant to matters before the Councils, including—
 - (A) fishery science and basic stock assessment methods;
 - (B) fishery management techniques, data needs, and Council procedures;
 - (C) social science and fishery economics;
 - (D) tribal treaty rights and native customs, access, and other rights related to Western Pacific indigenous communities;
 - (E) legal requirements of this Act, including conflict of interest and disclosure provisions of this section and related policies;
 - (F) other relevant legal and regulatory requirements, including the National Environmental Policy Act (42 U.S.C. 4321 et seq.);
 - (G) public process for development of fishery management plans;
 - (H) other topics suggested by the Council; **and**
 - (I) recreational and commercial fishing information, including fish harvesting techniques, gear types, fishing vessel types, and economics for the fisheries within each Council's jurisdiction; **and**
 - (J) **ecosystem-based fishery management.**⁵⁸
- (2) MEMBER TRAINING.—The training course shall be available to both new and existing Council members, staff from the regional offices and regional science centers of the National Marine Fisheries Service, and may be made available to committee or advisory panel members as resources allow.

⁵⁷ Begich page 17 lines 7-11

⁵⁸ Begich page 17 lines 12-18. No major changes; adds ecosystem management as a training topic.

- (3) **REQUIRED TRAINING.**—Council members appointed after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 shall complete a training course that meets the requirements of this section not later than 1 year after the date on which they were appointed. Any Council member who has completed a training course within 24 months before the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 shall be considered to have met the training requirement of this paragraph.

(l) COUNCIL COORDINATION COMMITTEE.—The Councils may establish a Council coordination committee consisting of the chairs, vice chairs, and executive directors of each of the 8 Councils described in subsection (a)(1), or other Council members or staff, in order to discuss issues of relevance to all Councils, including issues related to the implementation of this Act.

(m) CONSIDERATIONS FOR MODIFICATIONS TO ANNUAL CATCH LIMIT REQUIREMENTS.—

- (1) **CONSIDERATION OF ECOSYSTEM AND ECONOMIC IMPACTS.**—In establishing annual catch limits a Council may, consistent with section 302(h)(6), consider changes in an ecosystem and the economic needs of the fishing communities.
- (2) **LIMITATIONS TO ANNUAL CATCH LIMIT REQUIREMENT FOR SPECIAL FISHERIES.**—Notwithstanding subsection (h)(6), a Council is not required to develop an annual catch limit for—
- (A) an ecosystem component species;
 - (B) a fishery for a species that has a life cycle of approximately 1 year, unless the Secretary has determined the fishery is subject to overfishing; or
 - (C) a stock for which—
 - (i) more than half of a single-year class will complete their life cycle in less than 18 months; and
 - (ii) fishing mortality will have little impact on the stock.
- (3) **RELATIONSHIP TO INTERNATIONAL EFFORTS.**—Each annual catch limit may, consistent with section 302(h)(6), take into account—
- (A) management measures under international agreements in which the United States participates; and
 - (B) informal transboundary agreements under which fishery management activities by another country outside the exclusive economic zone may hinder conservation efforts by United States fishermen for a fish species for which any of the recruitment, distribution, life history, or fishing activities are transboundary.
- (4) **AUTHORIZATION FOR MULTISPECIES COMPLEXES AND MULTIYEAR ANNUAL CATCH LIMITS.**—
- For purposes of subsection (h)(6), a Council may establish—
- (A) an annual catch limit for a stock complex; or
 - (B) annual catch limits for each year in any continuous period that is not more than three years in duration.
- (5) **ECOSYSTEM COMPONENT SPECIES DEFINED.**—In this subsection the term ‘ecosystem component species’ means a stock of fish that is a nontarget, incidentally harvested stock of fish in a fishery, or a nontarget, incidentally harvested stock of fish that a Council or the Secretary has determined—
- (A) is not subject to overfishing, approaching a depleted condition or depleted; and
 - (B) is not likely to become subject to overfishing or depleted in the absence of conservation and

SEC. 303. CONTENTS OF FISHERY MANAGEMENT PLANS

16 U.S.C. 1853

(a) REQUIRED PROVISIONS.—Any fishery management plan which is prepared by any Council, or by the Secretary, with respect to any fishery, shall—

- (1) contain the conservation and management measures, applicable to foreign fishing and fishing by vessels of the United States, which are—
 - (A) necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild ~~overfished~~ depleted stocks, and to protect, restore, and promote the long-term health and stability of the fishery;
 - (B) described in this subsection or subsection (b), or both; and
 - (C) consistent with the national standards, the other provisions of this Act, regulations implementing recommendations by international organizations in which the United States participates (including but not limited to closed areas, quotas, and size limits), and any other applicable law;
- (2) contain a description of the fishery, including, but not limited to, the number of vessels involved, the type and quantity of fishing gear used, the species of fish involved and their location, the cost likely to be incurred in management, actual and potential revenues from the fishery, any recreational interest in the fishery, and the nature and extent of foreign fishing and Indian treaty fishing rights, if any;
- (3) assess and specify the present and probable future condition of, and the maximum sustainable yield and optimum yield from, the fishery, and include a summary of the information utilized in making such specification;
- (4) assess and specify—
 - (A) the capacity and the extent to which fishing vessels of the United States, on an annual basis, will harvest the optimum yield specified under paragraph (3),
 - (B) the portion of such optimum yield which, on an annual basis, will not be harvested by fishing vessels of the United States and can be made available for foreign fishing, and
 - (C) the capacity and extent to which United States fish processors, on an annual basis, will process that portion of such optimum yield that will be harvested by fishing vessels of the United States;
- (5) specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, charter, and subsistence⁶⁰ fishing, and fish processing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, economic information necessary to meet the requirements of this Act, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors;
- (6) consider and provide for temporary adjustments, after consultation with the Coast Guard and persons utilizing the fishery, regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fishery; except that the adjustment shall not adversely affect conservation efforts in other fisheries or discriminate among par-

⁵⁹ HR 4742 page 6-9, lines 20-7. The Council recommends language specifying that a carryover exception allow ACLs to be exceeded in order to carry over surplus and deficit harvest from one year to the next, provided there is a finding from the SSC that such a carryover provision will have negligible biological impacts. However, it appears the House Discussion Draft language goes beyond achieving this goal, and the Council did not discuss additional language and its ramifications. (3/14, 3/26)

⁶⁰ Begich page 17 (end)

participants in the affected fishery;

- (7) describe and identify essential fish habitat for the fishery based on the guidelines established by the Secretary under section 305(b)(1)(A), minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat;
- (8) in the case of a fishery management plan that, after January 1, 1991, is submitted to the Secretary for review under section 304(a) (including any plan for which an amendment is submitted to the Secretary for such review) or is prepared by the Secretary, assess and specify the nature and extent of scientific data which is needed for effective implementation of the plan;
- ~~(9) include a fishery impact statement for the plan or amendment (in the case of a plan or amendment thereto submitted to or prepared by the Secretary after October 1, 1990) which shall assess, specify, and analyze the likely effects, if any, including the cumulative conservation, economic, and social impacts, of the conservation and management measures on, and possible mitigation measures for—~~
 - ~~(A) participants in the fisheries and fishing communities affected by the plan or amendment;~~
 - ~~(B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants; and~~
 - ~~(C) the safety of human life at sea, including whether and to what extent such measures may affect the safety of participants in the fishery;⁶¹~~
- ~~(10)~~(9) specify objective and measurable criteria for identifying when the fishery to which the plan applies is ~~overfished~~ ~~depleted~~ (with an analysis of how the criteria were determined and the relationship of the criteria to the reproductive potential of stocks of fish in that fishery) and, in the case of a fishery which the Council or the Secretary has determined is approaching an ~~overfished~~ ~~depleted~~ condition or is overfished, contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery;
- ~~(11)~~(10) establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority—
 - (A) minimize bycatch; and
 - (B) minimize the mortality of bycatch which cannot be avoided;
- ~~(12)~~(11) assess the type and amount of fish caught and released alive during recreational fishing under catch and release fishery management programs and the mortality of such fish, and include conservation and management measures that, to the extent practicable, minimize mortality and ensure the extended survival of such fish;
- ~~(13)~~(12) include a description of the commercial, recreational, and charter, **and subsistence** fishing sectors which participate in the fishery, including its economic impact, and, to the extent practicable, quantify trends in landings of the managed fishery resource by the commercial, recreational, and charter, **and subsistence** fishing sectors;⁶²
- (14) **in the case of a fishery for a forage fish—**
 - (A) **when determining annual catch limits under this Act, assess, specify, and adjust those limits by the feeding requirements of dependent fish throughout the range of the dependent fish⁶³; and**
 - (B) **include a control rule developed and applied by the scientific and statistical committee of the**

61 **Change from discussion draft.** New deletion; another section on fishery impact statements is added. HR 4742 page 11 lines 16-19.

62 All “subsistence” additions - Begich page 18.

63 Could require a substantial amount of work.

relevant Council to derive annual recommendations—

- (i) for acceptable biological catch for a fishery for forage fish and a minimum reference point to determine when a fishery for forage fish should close; and
 - (ii) that account for the importance of forage fish to managed fish species throughout the range of the managed fish species;
- (15) assess the fishery dependent data needs of the fishery and, if necessary to meet those needs, establish an integrated data collection program⁶⁴ under subsection (e) to gather and analyze data required for fisheries management; and⁶⁵
- ~~(14 16)~~(14) to the extent that rebuilding plans or other conservation and management measures which reduce the overall harvest in a fishery are necessary, allocate, taking into consideration the economic impact of the harvest restrictions or recovery benefits on the fishery participants in each sector, any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, ~~and~~ charter, ~~and subsistence~~ fishing sectors in the fishery and
- ~~(15 17)~~(15) ~~establish a mechanism subject to subsection (d),~~ establish a mechanism⁶⁶ for specifying annual catch limits in the plan (including a multiyear plan), implementing regulations, or annual specifications, at a level such that overfishing does not occur in the fishery, including measures to ensure accountability.

(b) DISCRETIONARY PROVISIONS.—Any fishery management plan which is prepared by any Council, or by the Secretary, with respect to any fishery, may—

- (1) require a permit to be obtained from, and fees to be paid to, the Secretary, with respect to—
 - (A) any fishing vessel of the United States fishing, or wishing to fish, in the exclusive economic zone [or special areas,]* or for anadromous species or Continental Shelf fishery resources beyond such zone [or areas]*;
 - (B) the operator of any such vessel; or
 - (C) any United States fish processor who first receives fish that are subject to the plan;
- (2)
 - (A) designate zones where, and periods when, fishing shall be limited, or shall not be permitted, or shall be permitted only by specified types of fishing vessels or with specified types and quantities of fishing gear;
 - (B) designate such zones in areas where deep sea corals are identified under section 408, to protect deep sea corals from physical damage from fishing gear or to prevent loss or damage to such fishing gear from interactions with deep sea corals, after considering long-term sustainable uses of fishery resources in such areas; and
 - (C) with respect to any closure of an area under this Act that prohibits all fishing, ensure that such closure—
 - (i) is based on the best scientific information available;
 - (ii) includes criteria to assess the conservation benefit of the closed area;
 - (iii) establishes a timetable for review of the closed area's performance that is consistent with the purposes of the closed area; and
 - (iv) is based on an assessment of the benefits and impacts of the closure, including its size, in

64 Establishes a new integrated data collection program. See Section (e) below for details.

65 Begich pages 18-19 lines 12-11

66 Begich page 19 lines 12-15

relation to other management measures (either alone or in combination with such measures), including the benefits and impacts of limiting access to: users of the area, overall fishing activity, fishery science, and fishery and marine conservation;

- (3) establish specified limitations which are necessary and appropriate for the conservation and management of the fishery on the—
 - (A) catch of fish (based on area, species, size, number, weight, sex, bycatch, total biomass, or other factors);
 - (B) sale of fish caught during commercial, recreational, or charter fishing, consistent with any applicable Federal and State safety and quality requirements; and
 - (C) transshipment or transportation of fish or fish products under permits issued pursuant to section 204;
- (4) prohibit, limit, condition, or require the use of specified types and quantities of fishing gear, fishing vessels, or equipment for such vessels, including devices which may be required to facilitate enforcement of the provisions of this Act;
- (5) incorporate (consistent with the national standards, the other provisions of this Act, and any other applicable law) the relevant fishery conservation and management measures of the coastal States nearest to the fishery and take into account the different circumstances affecting fisheries from different States and ports, including distances to fishing grounds and proximity to time and area closures;
- (6) establish a limited access system for the fishery in order to achieve optimum yield if, in developing such system, the Council and the Secretary take into account—
 - (A) present participation in the fishery;
 - (B) historical fishing practices in, and dependence on, the fishery;
 - (C) the economics of the fishery;
 - (D) the capability of fishing vessels used in the fishery to engage in other fisheries;
 - (E) the cultural and social framework relevant to the fishery and any affected fishing communities;
 - (F) the fair and equitable distribution of access privileges in the fishery; and
 - (G) any other relevant considerations;
- (7) require fish processors who first receive fish that are subject to the plan to submit data which are necessary for the conservation and management of the fishery;
- (8) require that one or more observers be carried on board a vessel of the United States engaged in fishing for species that are subject to the plan, for the purpose of collecting data necessary for the conservation and management of the fishery; except that such a vessel shall not be required to carry an observer on board if the facilities of the vessel for the quartering of an observer, or for carrying out observer functions, are so inadequate or unsafe that the health or safety of the observer or the safe operation of the vessel would be jeopardized;
- (9) assess and specify the effect which the conservation and management measures of the plan will have on the stocks of naturally spawning anadromous fish in the region;
- (10) include, consistent with the other provisions of this Act, conservation and management measures that provide harvest incentives for participants within each gear group to employ fishing practices that result in lower levels of bycatch or in lower levels of the mortality of bycatch;
- (11) reserve a portion of the allowable biological catch of the fishery for use in scientific research;
- (12) include management measures in the plan to conserve target and non-target species and habitats, considering the variety of ecological factors affecting fishery populations; and
- (14) [sic] prescribe such other measures, requirements, or conditions and restrictions as are determined to be necessary and appropriate for the conservation and management of the fishery.

- (c) **PROPOSED REGULATIONS.—**Proposed regulations which the Council deems necessary or appropriate for the purposes of—
- (1) implementing a fishery management plan or plan amendment shall be submitted to the Secretary simultaneously with the plan or amendment under section 304; and
 - (2) making modifications to regulations implementing a fishery management plan or plan amendment may be submitted to the Secretary at any time after the plan or amendment is approved under section 304.
- (d) **FISHERY IMPACT STATEMENT—**
- (1) Any fishery management plan (or fishery management plan amendment) prepared by any Council or by the Secretary pursuant to subsection (a) or (b), or proposed regulations deemed necessary pursuant to subsection (c), shall include a fishery impact statement which shall assess, specify and analyze the likely effects and impact of the proposed action on the quality of the human environment.
 - (2) The fishery impact statement shall describe—
 - (A) a purpose of the proposed action;
 - (B) the environmental impact of the proposed action;
 - (C) any adverse environmental effects which cannot be avoided should the proposed action be implemented;
 - (D) a reasonable range of alternatives to the proposed action;
 - (E) the relationship between short-term use of fishery resources and the enhancement of long-term productivity;
 - (F) the cumulative conservation and management effects; and
 - (G) economic, and social impacts of the proposed action on—
 - (i) participants in the fisheries and fishing communities affected by the proposed action;
 - (ii) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants; and
 - (iii) the safety of human life at sea, including whether and to what extent such measures may affect the safety of participants in the fishery.
 - (3) A substantially complete fishery impact statement, which may be in draft form, shall be available not less than 14 days before the beginning of the meeting at which a Council makes its final decision on the proposal (for plans, plan amendments, or proposed regulations prepared by a Council pursuant to subsection (a) or (c)). Availability of this fishery impact statement will be announced by the methods used by the council to disseminate public information and the public and relevant government agencies will be invited to comment on the fishery impact statement.
 - (4) The completed fishery impact statement shall accompany the transmittal of a fishery management plan or plan amendment as specified in section 304(a), as well as the transmittal of proposed regulations as specified in section 304(b).
 - (5) The Councils shall, subject to approval by the Secretary, establish criteria to determine actions or classes of action of minor significance regarding subparagraphs (A), (B), (D), (E), and (F) of paragraph (2), for which preparation of a fishery impact statement is unnecessary and categorically excluded from the requirements of this section, and the documentation required to establish the exclusion.
 - (6) The Councils shall, subject to approval by the Secretary, prepare procedures for compliance with this section that provide for timely, clear, and concise analysis that is useful to decisionmakers and the public, reduce extraneous paperwork and effectively involve the public, including—

- (A) using Council meetings to determine the scope of issues to be addressed and identifying significant issues related to the proposed action;
 - (B) integration of the fishery impact statement development process with preliminary and final Council decisionmaking in a manner that provides opportunity for comment from the public and relevant government agencies prior to these decision points; and
 - (C) providing scientific, technical, and legal advice at an early stage of the development of the fishery impact statement to ensure timely transmittal and Secretarial review of the proposed fishery management plan, plan amendment, or regulations to the Secretary.
- (7) Actions taken in accordance with the procedures of this section shall constitute fulfillment of the requirements the National Environmental Policy Improvement Act of 1970 (42 U.S.C. 4371 et seq.) and all related implementing regulations.⁶⁷

(d) LIMITATIONS—

(1) IN GENERAL.—The requirements under subsection (a)(17) [ACLs] shall not—

- (A) apply to a species in a fishery that has a mean life cycle of 18 months or less, or to a species in a fishery with respect to which all spawning and recruitment occurs beyond State waters and the exclusive economic zone, unless the Secretary has determined the fishery is subject to overfishing of that species;⁶⁸
 - (B) limit or otherwise affect the requirements of section 301(a)(1) or 304(e) of this Act; and
 - (C) be construed as requiring that a fishery management plan specify a separate annual catch limit and accountability measures for each individual species of non-target fish in the fishery.⁶⁹
- (2) CONSTRUCTION.—Nothing in this subsection shall be construed to affect any effective date regarding the requirements under subsection (a)(17) otherwise provided for under an international agreement in which the United States participates.

(e) INTEGRATED DATA COLLECTION.—

(1) IN GENERAL.—Any integrated data collection required by subsection (a)(15) shall—

- (A) have scientific data collection as its principal purpose;
- (B) specifically consider the requirements of section 301(a)(8);
- (C) with respect to any data to be collected from a fishing vessel while that vessel is at-sea, give first consideration and priority to the utilization of electronic monitoring;
- (D) subject to paragraph (3), provide for a system of fees on a fishery specific basis to be collected from participants in the fishery, including those persons whose participation is as direct harvesters or bycatch harvesters;
- (E) be developed in consultation with stakeholders, including fishery participants, equipment providers in the case of electronic monitoring systems, and contractors in the case of human observers; and
- (F) include—
 - (i) initial performance standards for the fishery;
 - (ii) field support systems;

⁶⁷ *New addition (since discussion draft). More detail regarding integration of NEPA-like requirements with MSA. HR 4742 pages 11 (line 21)-15.*

⁶⁸ *See HR 4742 language in 302(m) for comparison*

⁶⁹ *A clarification, ACLs not needed for each non-target fish in a fishery.*

(iii) data review procedures; and

(iv) implementation strategies.⁷⁰

(2) **IMPORTANCE OF FISHERY RESOURCES TO FISHING COMMUNITIES.**—When specifically considering the requirements of section 301(a)(8), the integrated data collection required by subsection (a)(15) may provide, as appropriate, for electronic monitoring, human observers, and dockside monitoring.

(3) **SYSTEM OF FEES.**—The system of fees under paragraph (1)(D) shall be consistent with the applicable sections of this title.⁷¹

P.L. 109-479, sec. 104(b), MSA § 303 note 16 U.S.C. 1853 note EFFECTIVE DATES; APPLICATION TO CERTAIN SPECIES.—The amendment made by subsection (a)(10) —

(1) shall, unless otherwise provided for under an international agreement in which the United States participates, take effect—

(A) in fishing year 2010 for fisheries determined by the Secretary to be subject to overfishing; and

(B) in fishing year 2011 for all other fisheries; and

(2) shall not apply to a fishery for species that have a life cycle of approximately 1 year unless the Secretary has determined the fishery is subject to overfishing of that species; and

(3) shall not limit or otherwise affect the requirements of section 301(a)(1) or 304(e) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1851(a)(1) or 1854(e), respectively).

SEC. 303A. LIMITED ACCESS PRIVILEGE PROGRAMS

16 U.S.C. 1853a

(a) **IN GENERAL.**—After the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, a Council may submit, and the Secretary may approve, for a fishery that is managed under a limited access system, a limited access privilege program to harvest fish if the program meets the requirements of this section.

(b) **NO CREATION OF RIGHT, TITLE, OR INTEREST.**—Limited access privilege, quota share, or other limited access system authorization established, implemented, or managed under this Act—

(1) shall be considered a permit for the purposes of sections 307, 308, and 309;

(2) may be revoked, limited, or modified at any time in accordance with this Act, including revocation if the system is found to have jeopardized the sustainability of the stock or the safety of fishermen;

(3) shall not confer any right of compensation to the holder of such limited access privilege, quota share, or other such limited access system authorization if it is revoked, limited, or modified;

(4) shall not create, or be construed to create, any right, title, or interest in or to any fish before the fish is harvested by the holder; and

(5) shall be considered a grant of permission to the holder of the limited access privilege or quota share to engage in activities permitted by such limited access privilege or quota share.

(c) **REQUIREMENTS FOR LIMITED ACCESS PRIVILEGES.**—

(1) **IN GENERAL.**—Any limited access privilege program to harvest fish submitted by a Council or approved by the Secretary under this section shall—

(A) if established in a fishery that is **overfished depleted** or subject to a rebuilding plan, assist in its

⁷⁰ Begich establishes an integrated data collection (cooperative research)

⁷¹ Begich pages 19 lines 17 to 22 line 3

- rebuilding;
- (B) if established in a fishery that is determined by the Secretary or the Council to have over-capacity, contribute to reducing capacity;
 - (C) promote—
 - (i) fishing safety;
 - (ii) fishery conservation and management; and
 - (iii) social and economic benefits;
 - (D) prohibit any person other than a United States citizen, a corporation, partnership, or other entity established under the laws of the United States or any State, or a permanent resident alien, that meets the eligibility and participation requirements established in the program from acquiring a privilege to harvest fish, including any person that acquires a limited access privilege solely for the purpose of perfecting or realizing on a security interest in such privilege;
 - (E) require that all fish harvested under a limited access privilege program be processed on vessels of the United States or on United States soil (including any territory of the United States);
 - (F) specify the goals of the program;
 - (G) include provisions for the regular monitoring and review by the Council and the Secretary of the operations of the program, including determining progress in meeting the goals of the program and this Act, and any necessary modification of the program to meet those goals, with a formal and detailed review 5 years after the implementation of the program and thereafter to coincide with scheduled Council review of the relevant fishery management plan (but no less frequently than once every 7 years);
 - (H) include an effective system for enforcement, monitoring, and management of the program, including the use of observers or electronic monitoring systems;
 - (I) include an appeals process for administrative review of the Secretary's decisions regarding initial allocation of limited access privileges;
 - (J) provide for the establishment by the Secretary, in consultation with appropriate Federal agencies, for an information collection and review process to provide any additional information needed to determine whether any illegal acts of anti-competition, anti-trust, price collusion, or price fixing have occurred among regional fishery associations or persons receiving limited access privileges under the program; and
 - (K) provide for the revocation by the Secretary of limited access privileges held by any person found to have violated the antitrust laws of the United States.
- (2) WAIVER.—The Secretary may waive the requirement of paragraph (1)(E) if the Secretary determines that—
- (A) the fishery has historically processed the fish outside of the United States; and
 - (B) the United States has a seafood safety equivalency agreement with the country where processing will occur.
- (3) FISHING COMMUNITIES.—
- (A) IN GENERAL.—
 - (i) ELIGIBILITY.—To be eligible to participate in a limited access privilege program to harvest fish, a fishing community shall—
 - (I) be located within the management area of the relevant Council;
 - (II) meet criteria developed by the relevant Council, approved by the Secretary, and published in the Federal Register;

- (III) consist of residents who conduct commercial or recreational fishing, processing, or fishery-dependent support businesses within the Council's management area; and
 - (IV) develop and submit a community sustainability plan to the Council and the Secretary that demonstrates how the plan will address the social and economic development needs of coastal communities, including those that have not historically had the resources to participate in the fishery, for approval based on criteria developed by the Council that have been approved by the Secretary and published in the Federal Register.
- (ii) FAILURE TO COMPLY WITH PLAN.—The Secretary shall deny or revoke limited access privileges granted under this section for any person who fails to comply with the requirements of the community sustainability plan. Any limited access privileges denied or revoked under this section may be reallocated to other eligible members of the fishing community.
- (B) PARTICIPATION CRITERIA.—In developing participation criteria for eligible communities under this paragraph, a Council shall consider—
 - (i) traditional fishing or processing practices in, and dependence on, the fishery;
 - (ii) the cultural and social framework relevant to the fishery;
 - (iii) economic barriers to access to fishery;
 - (iv) the existence and severity of projected economic and social impacts associated with implementation of limited access privilege programs on harvesters, captains, crew, processors, and other businesses substantially dependent upon the fishery in the region or subregion;
 - (v) the expected effectiveness, operational transparency, and equitability of the community sustainability plan; and
 - (vi) the potential for improving economic conditions in remote coastal communities lacking resources to participate in harvesting or processing activities in the fishery.
- (4) REGIONAL FISHERY ASSOCIATIONS.—
 - (A) IN GENERAL.—To be eligible to participate in a limited access privilege program to harvest fish, a regional fishery association shall—
 - (i) be located within the management area of the relevant Council;
 - (ii) meet criteria developed by the relevant Council, approved by the Secretary, and published in the Federal Register;
 - (iii) be a voluntary association with established by-laws and operating procedures;
 - (iv) consist of participants in the fishery who hold quota share that are designated for use in the specific region or subregion covered by the regional fishery association, including commercial or recreational fishing, processing, fishery-dependent support businesses, or fishing communities;
 - (v) not be eligible to receive an initial allocation of a limited access privilege but may acquire such privileges after the initial allocation, and may hold the annual fishing privileges of any limited access privileges it holds or the annual fishing privileges that is [sic] members contribute; and
 - (vi) develop and submit a regional fishery association plan to the Council and the Secretary for approval based on criteria developed by the Council that have been approved by the Secretary and published in the Federal Register.
 - (B) FAILURE TO COMPLY WITH PLAN.—The Secretary shall deny or revoke limited access privileges granted under this section to any person participating in a regional fishery association who

fails to comply with the requirements of the regional fishery association plan.

- (C) PARTICIPATION CRITERIA.—In developing participation criteria for eligible regional fishery associations under this paragraph, a Council shall consider—
 - (i) traditional fishing or processing practices in, and dependence on, the fishery;
 - (ii) the cultural and social framework relevant to the fishery;
 - (iii) economic barriers to access to fishery;
 - (iv) the existence and severity of projected economic and social impacts associated with implementation of limited access privilege programs on harvesters, captains, crew, processors, and other businesses substantially dependent upon the fishery in the region or subregion;
 - (v) the administrative and fiduciary soundness of the association; and
 - (vi) the expected effectiveness, operational transparency, and equitability of the fishery association plan.
- (5) ALLOCATION.—In developing a limited access privilege program to harvest fish a Council or the Secretary shall—
 - (A) establish procedures to ensure fair and equitable initial allocations, including consideration of—
 - (i) current and historical harvests;
 - (ii) employment in the harvesting and processing sectors;
 - (iii) investments in, and dependence upon, the fishery; and
 - (iv) the current and historical participation of fishing communities;
 - (B) consider the basic cultural and social framework of the fishery, especially through—
 - (i) the development of policies to promote the sustained participation of small owner-operated fishing vessels and fishing communities that depend on the fisheries, including regional or port-specific landing or delivery requirements; and
 - (ii) procedures to address concerns over excessive geographic or other consolidation in the harvesting or processing sectors of the fishery;
 - (C) include measures to assist, when necessary and appropriate, entry-level and small vessel owner-operators, captains, crew, and fishing communities through set-asides of harvesting allocations, including providing privileges, which may include set-asides or allocations of harvesting privileges, or economic assistance in the purchase of limited access privileges;
 - (D) ensure that limited access privilege holders do not acquire an excessive share of the total limited access privileges in the program by—
 - (i) establishing a maximum share, expressed as a percentage of the total limited access privileges, that a limited access privilege holder is permitted to hold, acquire, or use; and
 - (ii) establishing any other limitations or measures necessary to prevent an inequitable concentration of limited access privileges; and
 - (E) authorize limited access privileges to harvest fish to be held, acquired, used by, or issued under the system to persons who substantially participate in the fishery, including in a specific sector of such fishery, as specified by the Council.
- (6) PROGRAM INITIATION.—
 - (A) LIMITATION.—Except as provided in subparagraph (D), a Council may initiate a fishery management plan or amendment to establish a limited access privilege program to harvest fish on its own initiative or if the Secretary has certified an appropriate petition.
 - (B) PETITION.—A group of fishermen constituting more than 50 percent of the permit holders, or holding more than 50 percent of the allocation, in the fishery for which a limited access privi-

lege program to harvest fish is sought, may submit a petition to the Secretary requesting that the relevant Council or Councils with authority over the fishery be authorized to initiate the development of the program. Any such petition shall clearly state the fishery to which the limited access privilege program would apply. For multispecies permits in the Gulf of Mexico, only those participants who have substantially fished the species proposed to be included in the limited access program shall be eligible to sign a petition for such a program and shall serve as the basis for determining the percentage described in the first sentence of this subparagraph.

- (C) CERTIFICATION BY SECRETARY.—Upon the receipt of any such petition, the Secretary shall review all of the signatures on the petition and, if the Secretary determines that the signatures on the petition represent more than 50 percent of the permit holders, or holders of more than 50 percent of the allocation in the fishery, as described by subparagraph (B), the Secretary shall certify the petition to the appropriate Council or Councils.

- (D) NEW ENGLAND AND GULF REFERENDUM.—

~~(i) Except as provided in clause (iii) for the Gulf of Mexico commercial red snapper fishery, the New England and Gulf Councils may not submit, and the Secretary may not approve or implement, a fishery management plan or amendment that creates an individual fishing quota program, including a Secretarial plan, unless such a system, as ultimately developed, has been approved by more than 2/3 of those voting in a referendum among eligible permit holders, or other persons described in clause (v), with respect to the New England Council, and by a majority of those voting in the referendum among eligible permit holders with respect to the Gulf Council. For multispecies permits in the Gulf of Mexico, only those participants who have substantially fished the species proposed to be included in the individual fishing quota program shall be eligible to vote in such a referendum. If an individual fishing quota program fails to be approved by the requisite number of those voting, it may be revised and submitted for approval in a subsequent referendum.~~

- (D) CATCH SHARE REFERENDUM PILOT PROGRAM—

- (i) The New England, Mid-Atlantic, South Atlantic, and Gulf of Mexico Councils may not submit a fishery management plan or amendment that creates a catch share program for a fishery, and the Secretary may not approve or implement such a plan or amendment submitted by such a Council or a secretarial plan or amendment under section 304(c) that creates such a program, unless the final program has been approved, in a referendum in accordance with this subparagraph, by a majority of the permit holders eligible to participate in the fishery. For multispecies permits in the Gulf of Mexico, any permit holder with landings from within the sector of the fishery being considered for the catch share program within the 5-year period preceding the date of the referendum and still active in fishing in the fishery shall be eligible to participate in such a referendum. If a catch share program is not approved by the requisite number of permit holders, it may be revised and submitted for approval in a subsequent referendum.
- (ii) The Secretary may, at the request of the New England Fishery Management Council, allow participation in such a referendum for a fishery under the Council's authority, by fishing vessel crewmembers who derive a significant portion of their livelihood from such fishing⁷².
- (iii) The Secretary shall conduct a referendum under this subparagraph, including notifying all permit holders eligible to participate in the referendum and making available to them—
- (I) a copy of the proposed program;
 - (II) an estimate of the costs of the program, including costs to participants;

72 This paragraph is new in HR 4742.

- (III) an estimate of the amount of fish or percentage of quota each permit holder would be allocated; and
 - (IV) information concerning the schedule, procedures, and eligibility requirements for the referendum process.
 - (iii) For the purposes of this subparagraph, the term ‘permit holder eligible to participate’ only includes the holder of a permit for a fishery under which fishing has occurred in 3 of the 5 years preceding a referendum for the fishery, unless sickness, injury, or other unavoidable hardship prevented the permit holder from engaging in such fishing.
 - (iv) The Secretary may not implement any catch share program for any fishery managed exclusively by the Secretary unless first petitioned by a majority of those permit holders eligible to participate in the fishery.
- (2) **LIMITATION ON APPLICATION.**—The amendment made by paragraph (1) shall not apply to a catch share program that is submitted to, or proposed by, the Secretary of Commerce before the date of enactment of this Act.
- (3) **REGULATIONS.**—Before conducting a referendum under the amendment made by paragraph (1), the Secretary of Commerce shall issue regulations implementing such amendment after providing an opportunity for submission by the public of comments on the regulations.⁷³
- The Secretary shall conduct a referendum under this subparagraph, including notifying all persons eligible to participate in the referendum and making available to them information concerning the schedule, procedures, and eligibility requirements for the referendum process and the proposed individual fishing quota program. Within 1 year after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Secretary shall publish guidelines and procedures to determine procedures and voting eligibility requirements for referenda and to conduct such referenda in a fair and equitable manner.
 - The provisions of section 407(c) of this Act shall apply in lieu of this subparagraph for an individual fishing quota program for the Gulf of Mexico commercial red snapper fishery.
 - Chapter 35 of title 44, United States Code, (commonly known as the Paperwork Reduction Act) does not apply to the referenda conducted under this subparagraph.
 - The Secretary shall promulgate criteria for determining whether additional fishery participants are eligible to vote in the New England referendum described in clause (i) in order to ensure that crew members who derive a significant percentage of their total income from the fishery under the proposed program are eligible to vote in the referendum.
 - In this subparagraph, the term ‘individual fishing quota’ does not include a sector allocation.
- (iv) **TRANSFERABILITY.**—In establishing a limited access privilege program, a Council shall—
- establish a policy and criteria for the transferability of limited access privileges (through sale or lease), that is consistent with the policies adopted by the Council for the fishery under paragraph (5); and

⁷³ HR 4742 pages 17 line 14-page 20. Does not affect the PFMC.

- establish, in coordination with the Secretary, a process for monitoring of transfers (including sales and leases) of limited access privileges.
 - (v) **PREPARATION AND IMPLEMENTATION OF SECRETARIAL PLANS.**—This subsection also applies to a plan prepared and implemented by the Secretary under section 304(c) or 304(g).
 - (vi) **ANTITRUST SAVINGS CLAUSE.**—Nothing in this Act shall be construed to modify, impair, or supersede the operation of any of the antitrust laws. For purposes of the preceding sentence, the term ‘antitrust laws’ has the meaning given such term in subsection (a) of the first section of the Clayton Act, except that such term includes section 5 of the Federal Trade Commission Act to the extent that such section 5 applies to unfair methods of competition.
- (d) AUCTION AND OTHER PROGRAMS.**—In establishing a limited access privilege program, a Council shall consider, and may provide, if appropriate, an auction system or other program to collect royalties for the initial, or any subsequent, distribution of allocations in a limited access privilege program if—
- (1) the system or program is administered in such a way that the resulting distribution of limited access privilege shares meets the program requirements of this section; and
 - (2) revenues generated through such a royalty program are deposited in the Limited Access System Administration Fund established by section 305(h)(5)(B) and available subject to annual appropriations.
- (e) COST RECOVERY.**—In establishing a limited access privilege program, a Council shall—
- (1) develop a methodology and the means to identify and assess the management, data collection and analysis, and enforcement programs that are directly related to and in support of the program; and
 - (2) provide, under section 304(d)(2), for a program of fees paid by limited access privilege holders that will cover the costs of management, data collection and analysis, and enforcement activities.
- (f) CHARACTERISTICS.**—A limited access privilege established after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 is a permit issued for a period of not more than 10 years that—
- (1) will be renewed before the end of that period, unless it has been revoked, limited, or modified as provided in this subsection;
 - (2) will be revoked, limited, or modified if the holder is found by the Secretary, after notice and an opportunity for a hearing under section 554 of title 5, United States Code, to have failed to comply with any term of the plan identified in the plan as cause for revocation, limitation, or modification of a permit, which may include conservation requirements established under the plan;
 - (3) may be revoked, limited, or modified if the holder is found by the Secretary, after notice and an opportunity for a hearing under section 554 of title 5, United States Code, to have committed an act prohibited by section 307 of this Act; and
 - (4) may be acquired, or reacquired, by participants in the program under a mechanism established by the Council if it has been revoked, limited, or modified under paragraph (2) or (3).
- (g) LIMITED ACCESS PRIVILEGE ASSISTED PURCHASE PROGRAM.**—
- (1) **IN GENERAL.**—A Council may submit, and the Secretary may approve and implement, a program which reserves up to 25 percent of any fees collected from a fishery under section 304(d)(2) to be used, pursuant to section 53706(a)(7) of title 46, United States Code, to issue obligations that aid in financing—
 - (A) the purchase of limited access privileges in that fishery by fishermen who fish from small vessels; and

(B) the first-time purchase of limited access privileges in that fishery by entry level fishermen.

- (2) **ELIGIBILITY CRITERIA.**—A Council making a submission under paragraph (1) shall recommend criteria, consistent with the provisions of this Act, that a fisherman must meet to qualify for guarantees under subparagraphs (A) and (B) of paragraph (1) and the portion of funds to be allocated for guarantees under each subparagraph.

(h) EFFECT ON CERTAIN EXISTING SHARES AND PROGRAMS.—Nothing in this Act, or the amendments made by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, shall be construed to require a reallocation or a reevaluation of individual quota shares, processor quota shares, cooperative programs, or other quota programs, including sector allocation in effect before the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006.

(i) TRANSITION RULES.—

- (1) **IN GENERAL.**—The requirements of this section shall not apply to any quota program, including any individual quota program, cooperative program, or sector allocation for which a Council has taken final action or which has been submitted by a Council to the Secretary, or approved by the Secretary, within 6 months after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, except that—
- (A) the requirements of section 303(d) of this Act in effect on the day before the date of enactment of that Act shall apply to any such program;
- (B) the program shall be subject to review under subsection (c)(1)(G) of this section not later than 5 years after the program implementation; and
- (C) nothing in this subsection precludes a Council from incorporating criteria contained in this section into any such plans.
- (2) **PACIFIC GROUND FISH PROPOSALS.**—The requirements of this section, other than subparagraphs (A) and (B) of subsection (c)(1) and subparagraphs (A), (B), and (C) of paragraph (1) of this subsection, shall not apply to any proposal authorized under section 302(f) of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 that is submitted within the timeframe prescribed by that section.

16 U.S.C. 1853a note, 1854

MSA §§ 303A note, 304

P.L. 109-479, sec. 106(e), MSA § 303A note; 16 U.S.C. 1853a note

APPLICATION WITH AMERICAN FISHERIES ACT.—Nothing in section 303A of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.), as added by subsection (a) [P.L. 109-479], shall be construed to modify or supersede any provision of the American Fisheries Act (46 U.S.C. 12102 note; 16 U.S.C. 1851 note; et alia).

P.L. 104-297, sec. 108(i), MSA § 303 note

EXISTING QUOTA PLANS.—Nothing in this Act [P.L. 104-297] or the amendments made by this Act shall be construed to require a reallocation of individual fishing quotas under any individual fishing quota program approved by the Secretary before January 4, 1995.

SEC. 303B. FISHERY ECOSYSTEM PLANNING AUTHORITY

(a) DISCRETIONARY PLANNING AUTHORITY.—

- (1) **COUNCIL AUTHORITY.**—For a fishery or fisheries for which a fishery management plan has been prepared by a Regional Fishery Management Council and approved by the Secretary, the Council may, at the Council's discretion and in accordance with the provisions of this Act, prepare and submit to the Secretary a fishery ecosystem plan and amendments to such plan as are necessary from time to time or

required under subsection (c).⁷⁴

- (2) SECRETARIAL AUTHORITY.—For a fishery or fisheries for which a fishery management plan has been prepared and approved by the Secretary, the Secretary may, at the Secretary’s discretion and in accordance with the provisions of this Act, prepare a fishery ecosystem plan and amendments to such plan as are necessary from time to time or required under subsection (c).

(b) REQUIRED PROVISIONS.—A fishery ecosystem plan that is prepared at the discretion of a Council or the Secretary on or after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2014 shall—

- (1) contain a description of the fishery ecosystem and fishery ecosystem context, including—
 - (A) the geographical extent of the fishery ecosystem;
 - (B) the biological, physical, chemical, and socioeconomic aspects of the fishery ecosystem;
 - (C) the goods and services provided by the fishery ecosystem;
 - (D) the structure and function of the food web, including key predator-prey relationships and the habitat needs of different life history stages of key species that make up the food web;
 - (E) the indicators of fishery ecosystem health; and
 - (F) the impacts of activities on the fishery ecosystem and on indicators of fishery ecosystem health, including direct, indirect, and cumulative impacts of activities under the Council’s jurisdiction and outside the Council’s jurisdiction;
- (2) specify fishery ecosystem-level goals and objectives for management, including—
 - (A) identifying and preventing fishing rates or exploitation patterns that jeopardize the maintenance or recovery of the fishery ecosystem or biological community structure, function, stability, or resilience;
 - (B) protecting and restoring species diversity;
 - (C) protecting and restoring habitat diversity and integrity;
 - (D) protecting and restoring food web structure and function; and
 - (E) optimizing economic output;
- (3) assess the level of uncertainty in fishery ecosystem structure, function, data, and reasonably foreseeable responses to management action;
- (4) specify how the uncertainty under paragraph (3) is accounted for in conservation and management measures that achieve the goals and objectives under paragraph (2);
- (5) contain conservation and management measures—
 - (A) that achieve the goals and objectives under paragraph (2);
 - (B) that will be implemented through relevant fishery management plans; and
 - (C) that will not limit or otherwise affect the conservation requirements of the national standards or other provisions of this Act; and
- (6) contain a monitoring and evaluation plan—
 - (A) to describe available data sources and specify information gaps for assessing the performance of management in achieving fishery ecosystem-level goals and objectives specified under paragraph

⁷⁴ Allows for, but does not require, fishery ecosystem plans. The Secretary may also develop them. This section aims to clarify what ecosystem-based management is and how it can be incorporated into fishery management.

(2);

- (B) to develop measurable standards and performance measures based on indicators of fishery ecosystem health identified under paragraph (1)(E); and
- (C) to measure the achievement of fishery ecosystem-level goals and objectives specified under paragraph (2).

(c) ASSESSMENT AND UPDATING OF PLANS.—

- (1) **IN GENERAL.**—Each fishery ecosystem plan prepared by a Council or the Secretary shall be assessed and updated as necessary to better achieve ecosystem-level goals and objectives.
- (2) **ASSESSMENT CRITERIA.**—A plan assessment or update under paragraph (1) shall—
 - (A) identify research priorities—
 - (i) to improve monitoring of fishery ecosystem health and understanding of fishery ecosystem processes; and
 - (ii) to fill data gaps;
 - (B) analyze progress in meeting fishery ecosystem-level goals and objectives included in the fishery ecosystem plan; and
 - (C) specify additional actions that shall be taken when practicable to better meet fishery ecosystem-level goals and objectives.

(d) RULE OF CONSTRUCTION.—Nothing in this section shall be construed as requiring a Council or the Secretary to exercise the discretionary planning authority provided by this section.

CONFORMING AMENDMENT.—The table of contents in the Act is amended by inserting after the item relating to section 303A the following: “303B. Fishery ecosystem planning authority.”⁷⁵

SEC. 304. ACTION BY THE SECRETARY

16 U.S.C. 1854

(a) REVIEW OF PLANS.—

- (1) Upon transmittal by the Council to the Secretary of a fishery management plan, fishery ecosystem plan, or plan amendment, the Secretary shall—
 - (A) immediately commence a review of the plan or amendment to determine whether it is consistent with the national standards, the other provisions of this Act, and any other applicable law; and
 - (B) immediately publish in the Federal Register a notice stating that the plan or amendment is available and that written information, views, or comments of interested persons on the plan or amendment may be submitted to the Secretary during the 60-day period beginning on the date the notice is published.
- (2) In undertaking the review required under paragraph (1), the Secretary shall—
 - (A) take into account the information, views, and comments received from interested persons;
 - (B) consult with the Secretary of State with respect to foreign fishing; and
 - (C) consult with the Secretary of the department in which the Coast Guard is operating with respect to enforcement at sea and to fishery access adjustments referred to in section 303(a)(6); and

⁷⁵ Begich pages 23 line 8 - 27 line 25

(D) evaluate the adequacy of the accompanying fishery impact statement as basis for fully considering the environmental impacts of implementing the fishery management plan or plan amendment.⁷⁶

- (3) The Secretary shall approve, disapprove, or partially approve a plan or amendment within 30 days of the end of the comment period under paragraph (1) by written notice to the Council. A notice of disapproval or partial approval shall specify—
- (A) the applicable law with which the plan or amendment is inconsistent;
 - (B) the nature of such inconsistencies; and
 - (C) recommendations concerning the actions that could be taken by the Council to conform such plan or amendment to the requirements of applicable law.

If the Secretary does not notify a Council within 30 days of the end of the comment period of the approval, disapproval, or partial approval of a plan or amendment, then such plan or amendment shall take effect as if approved.

- (4) If the Secretary disapproves or partially approves a plan or amendment, the Council may submit a revised plan or amendment to the Secretary for review under this subsection.
- (5) For purposes of this subsection and subsection (b), the term “immediately” means on or before the 5th day after the day on which a Council transmits to the Secretary a fishery management plan, fishery ecosystem plan⁷⁷, plan amendment, or proposed regulation that the Council characterizes as final.

(b) REVIEW OF REGULATIONS.—

- (1) ~~Upon transmittal by the Council to the Secretary of proposed regulations prepared under section 303(c), the Secretary shall immediately initiate an evaluation of the proposed regulations to determine whether they are consistent with the fishery management plan, fishery ecosystem plan, plan amendment, this Act and other applicable law. Within 15 days of initiating such evaluation the Secretary shall make a determination and—~~
- (1) Upon transmittal by the Council to the Secretary of proposed regulations prepared under section 303(c), the Secretary shall immediately initiate an evaluation of the proposed regulations to determine whether they are consistent with the fishery management plan, plan amendment, this Act and other applicable law. The Secretary shall also immediately initiate an evaluation of the accompanying fishery impact statement as a basis for fully considering the environmental impacts of implementing the proposed regulations. Within 15 days of initiating such evaluation the Secretary shall make a determination and—⁷⁸
- (A) if that determination is affirmative, the Secretary shall publish such regulations in the Federal Register, with such technical changes as may be necessary for clarity and an explanation of those changes, for a public comment period of 15 to 60 days; or
 - (B) if that determination is negative, the Secretary shall notify the Council in writing of the inconsistencies and provide recommendations on revisions that would make the proposed regulations consistent with the fishery management plan, fishery ecosystem plan, plan amendment, this Act, and other applicable law.
- (2) Upon receiving a notification under paragraph (1)(B), the Council may revise the proposed regulations and submit them to the Secretary for reevaluation under paragraph (1).
- (3) The Secretary shall promulgate final regulations within 30 days after the end of the comment period under paragraph (1)(A). The Secretary shall consult with the Council before making any revisions to

76 *New since discussion draft. HR 4742 page 15 lines 14-24.*

77 *Begich page 28-29 (all additions of “fishery ecosystem plan”)*

78 *New since discussion draft. HR 4742 page 16 lines 1-18.*

the proposed regulations, and must publish in the Federal Register an explanation of any differences between the proposed and final regulations.

(c) PREPARATION AND REVIEW OF SECRETARIAL PLANS.—

- (1) The Secretary may prepare a fishery management plan, with respect to any fishery, [fishery ecosystem plan](#), or any amendment to any such plan, in accordance with the national standards, the other provisions of this Act, and any other applicable law, if—
 - (A) the appropriate Council fails to develop and submit to the Secretary, after a reasonable period of time, a fishery management plan for such fishery, or any necessary amendment to such a plan, if such fishery requires conservation and management;
 - (B) the Secretary disapproves or partially disapproves any such plan or amendment, or disapproves a revised plan or amendment, and the Council involved fails to submit a revised or further revised plan or amendment; or
 - (C) the Secretary is given authority to prepare such plan or amendment under this section.

In preparing any such plan or amendment, the Secretary shall consult with the Secretary of State with respect to foreign fishing and with the Secretary of the department in which the Coast Guard is operating with respect to enforcement at sea. The Secretary shall also prepare such proposed regulations as he deems necessary or appropriate to carry out each plan or amendment prepared by him under this paragraph.

- (2) In preparing any plan or amendment under this subsection, the Secretary shall—
 - (A) conduct public hearings, at appropriate times and locations in the geographical areas concerned, so as to allow interested persons an opportunity to be heard in the preparation and amendment of the plan and any regulations implementing the plan; and
 - (B) consult with the Secretary of State with respect to foreign fishing and with the Secretary of the department in which the Coast Guard is operating with respect to enforcement at sea.
- (3) Notwithstanding paragraph (1) for a fishery under the authority of a Council, the Secretary may not include in any fishery management plan [or fishery ecosystem plan](#), or any amendment to any such plan, prepared by him, a provision establishing a limited access system, including any limited access privilege program unless such system is first approved by a majority of the voting members, present and voting, of each appropriate Council.
- (4) Whenever the Secretary prepares a fishery management plan, [fishery ecosystem plan](#), or plan amendment under this section, the Secretary shall immediately—
 - (A) for a plan or amendment for a fishery under the authority of a Council, submit such plan or amendment to the appropriate Council for consideration and comment; and
 - (B) publish in the Federal Register a notice stating that the plan or amendment is available and that written information, views, or comments of interested persons on the plan or amendment may be submitted to the Secretary during the 60-day period beginning on the date the notice is published.
- (5) Whenever a plan or amendment is submitted under paragraph (4)(A), the appropriate Council must submit its comments and recommendations, if any, regarding the plan or amendment to the Secretary before the close of the 60-day period referred to in paragraph (4)(B). After the close of such 60-day period, the Secretary, after taking into account any such comments and recommendations, as well as any views, information, or comments submitted under paragraph (4)(B), may adopt such plan or amendment.
- (6) The Secretary may propose regulations in the Federal Register to implement any plan or amendment prepared by the Secretary. In the case of a plan or amendment to which paragraph (4)(A) applies, such regulations shall be submitted to the Council with such plan or amendment. The comment period on

proposed regulations shall be 60 days, except that the Secretary may shorten the comment period on minor revisions to existing regulations.

- (7) The Secretary shall promulgate final regulations within 30 days after the end of the comment period under paragraph (6). The Secretary must publish in the Federal Register an explanation of any substantive differences between the proposed and final rules. All final regulations must be consistent with the fishery management plan, [with the fishery ecosystem plan](#), with the national standards and other provisions of this Act, and with any other applicable law.

(d) ESTABLISHMENT OF FEES.—

- (1) The Secretary shall by regulation establish the level of any fees which are authorized to be charged pursuant to section 303(b)(1). The Secretary may enter into a cooperative agreement with the States concerned under which the States administer the permit system and the agreement may provide that all or part of the fees collected under the system shall accrue to the States. The level of fees charged under this subsection shall not exceed the administrative costs incurred in issuing the permits.
- (2)
- (A) Notwithstanding paragraph (1), the Secretary is authorized and shall collect a fee to recover the actual costs directly related to the management, data collection, and enforcement of any—
- (i) limited access privilege program; [and](#)
 - (ii) community development quota program that allocates a percentage of the total allowable catch of a fishery to such program; [and](#)
 - (iii) [management program that allocates a percentage of the total allowable catch to individuals who have formed a sector](#)⁷⁹
- (B) Such fee shall not exceed 3 percent of the ex-vessel value of fish harvested under any such program, and shall be collected at either the time of the landing, filing of a landing report, or sale of such fish during a fishing season or in the last quarter of the calendar year in which the fish is harvested.
- (C)
- (i) Fees collected under this paragraph shall be in addition to any other fees charged under this Act and shall be deposited in the Limited Access System Administration Fund established under section 305(h)(5)(B).
 - (ii) Upon applicati ~~overfished depleted~~ on by a State, the Secretary shall transfer to such State up to 33 percent of any fee collected pursuant to subparagraph (A) under a community development quota program and deposited in the Limited Access System Administration Fund in order to reimburse such State for actual costs directly incurred in the management and enforcement of such program.
- (D) ~~The shall report annually on the amount collected under this paragraph from each fishery and detail how the funds were spent in the prior year on a fishery-by-fishery basis, to--~~
- ~~(i) Congress; and~~
 - ~~(ii) each Council from whose fisheries the fee under this paragraph were collected.~~⁸⁰
- (3) [The Secretary shall not collect any fee under this section or section 313\(a\) before preparing an analysis that identifies the costs that will be recovered by the fee and the costs that will not be recovered by the](#)

79 *Begich page 29 lines 18-21. This is meant to address sector co-ops as implemented in New England. It may be helpful to define the difference between a “sector” and “individuals who have formed a sector.”*

80 *HR 4742 addition since discussion draft. Page 20 line 21.*

fee. The analysis shall be included in the applicable fisheries management plan.⁸¹

(e) REBUILDING ~~OVERFISHED DEPLETED~~ FISHERIES.—

(e) REBUILDING OVERFISHED AND OTHERWISE DEPLETED FISHERIES.--⁸²

- (1) BEGICH VERSION - The Secretary shall report annually to the Congress and the Councils on the status of fisheries within each Council's geographical area of authority and identify those fisheries that are overfished, ~~otherwise depleted~~ or are approaching a condition of being overfished or ~~otherwise depleted~~. For those fisheries managed under a fishery management plan or international agreement, the status shall be determined using the criteria for overfishing (~~or depletion, where applicable~~) specified in ~~such the~~ plan or agreement. A fishery shall be classified as approaching a condition of being overfished ~~or otherwise depleted~~ if, based on trends in fishing effort, fishery resource size, and other appropriate factors, the Secretary estimates that the fishery will become overfished ~~or otherwise depleted~~ within two years.⁸³
- (1) HASTINGS VERSION - The Secretary shall report annually to the Congress and the Councils on the status of fisheries within each Council's geographical area of authority and identify those fisheries that are overfished or are approaching a condition of being overfished. For those fisheries managed under a fishery management plan or international agreement, the status shall be determined using the criteria for overfishing specified in such plan or agreement. A fishery shall be classified as approaching a condition of being overfished if, based on trends in fishing effort, fishery resource size, and other appropriate factors, the Secretary estimates that the fishery will become ~~overfished depleted~~ within two years. ~~The report shall distinguish between fisheries that are depleted (or approaching that condition) as a result of fishing and fisheries that are depleted (or approaching that condition) as a result of factors other than fishing. The report shall state, for each fishery identified as depleted or approaching that condition, whether the fishery is the target of directed fishing.~~⁸⁴
- (2) If the Secretary determines at any time that a fishery is ~~overfished depleted~~, ~~overfished or otherwise depleted~~, the Secretary shall immediately notify the appropriate Council and request that action be taken to end overfishing in the fishery and to implement conservation and management measures to rebuild affected stocks of fish. The Secretary shall publish each notice under this paragraph in the Federal Register.
- (3) Within 2 years after an identification under paragraph (1) or notification under paragraphs (2) or (7), the appropriate Council (or the Secretary, for fisheries under section 302(a)(3)) shall prepare and implement a fishery management plan, plan amendment, or proposed regulations for the fishery to which the identification or notice applies—
 - (A) to end overfishing immediately in the fishery and to rebuild affected stocks of fish; or⁸⁵
 - (B) to prevent overfishing from occurring in the fishery whenever such fishery is identified as approaching an ~~overfished depleted~~ ~~overfished or otherwise depleted~~ condition.
- (4) For a fishery that is ~~overfished depleted~~, ~~overfished or otherwise depleted~~, any fishery management plan, amendment, or proposed regulations prepared pursuant to paragraph (3) or paragraph (5) for such fishery shall—
 - (A) specify a time period for rebuilding the fishery that shall—

81 Begich page 29-30 lines 23-3

82 Begich page 30 lines 8-9. Uses "overfished and otherwise depleted" instead of just "depleted."

83 Begich - all changes pages 30-31 lines 12-2

84 HR 4742 page 10, lines 1-9. This is in line with Council recommendations to differentiate between causes of depletion.

85 Hastings discussion draft included phasing-in of rebuilding plans here; removed in HR 4742.

- (i) be as short as ~~possible practicable~~⁸⁶, taking into account the status and biology of any ~~overfished depleted overfished or otherwise depleted~~ stocks of fish, the needs of fishing communities, recommendations by international organizations in which the United States participates, and the interaction of the ~~overfished depleted overfished or otherwise depleted~~ stock of fish within the marine ecosystem; and

BEGICH VERSION

- (ii) except in cases where the biology of the stock of fish, other environmental conditions, or management measures under an international agreement in which the United States participates dictate otherwise, not exceed—
 - (I) the sum of the minimum time required to rebuild an affected stock of fish and the mean generation time of the affected stock of fish, if those time values are scientifically established and widely accepted among fish population biologists⁸⁷; or
 - (II) 10 years, if either of the time values specified in subclause (I) is not scientifically established and widely accepted among fish population biologists;⁸⁸

HASTINGS VERSION (AND ORIGINAL VERSION WHERE STRUCK OUT OR IN BLACK TEXT)

- (ii) may not exceed the time the stock would be rebuilt without fishing occurring plus one mean generation⁸⁹, except in a case in which—
 - (I) the biology of the stock of fish, other environmental conditions, or management measures under an international agreement in which the United States participates dictate otherwise;
 - (II) the Secretary determines that the cause of the stock being depleted is outside the jurisdiction of the Council or the rebuilding program cannot be effective only by limiting fishing activities;
 - (III) the Secretary determines that one or more components of a mixed-stock fishery is depleted but cannot be rebuilt within that timeframe without significant economic harm to the fishery, or cannot be rebuilt without causing another component of the mixed-stock fishery to approach a depleted status;
 - (IV) the Secretary determines that recruitment, distribution, or life history of, or fishing activities for, the stock are affected by informal transboundary agreements under which management activities outside the exclusive economic zone by another country may hinder conservation efforts by United States fishermen;and
 - (V) the Secretary determines that the stock has been affected by unusual events that make rebuilding within the specified time period improbable without significant

86 HR 4742 page 3 lines 8-9. *The Council approves of this change. (3/26 letter). Begich does not make this change.*

87 Rebuilding time would be “the sum of the minimum time required to rebuild an affected stock of fish and the mean generation time of the affected stock of fish, if those time values are scientifically established and widely accepted among fish population biologists;” [$T_{min} + 1$ mean generation), or 10 years if the science warrants. This is the timeline already used by Councils for species whose biology prevents them from being rebuilt in 10 years.

88 Begich pages 31-32 lines 16-8

89 HR 4742 page 3. *The Council endorses the deletion of the ten-year rebuilding time requirement and supports a maximum standard tied to the biology of the fish stock (one mean generation time) (3/26)*

economic harm to fishing communities; ~~not exceed 10 years, except in cases where the biology of the stock of fish, other environmental conditions, or management measures under an international agreement in which the United States participates dictate otherwise;~~⁹⁰

- (B) take into account environmental condition including predator/prey relationships⁹¹
 - ~~(B)~~ (C) allocate both overfishing restrictions and recovery benefits fairly and equitably among sectors of the fishery; ~~and~~
 - ~~(C)~~ (D) for fisheries managed under an international agreement, reflect traditional participation in the fishery, relative to other nations, by fishermen of the United States; ~~and~~
 - (E) specify a schedule for reviewing the rebuilding targets, evaluating environmental impacts on rebuilding progress, and evaluating progress being made toward reaching rebuilding targets.⁹²
- (5) If, within the 2-year period beginning on the date of identification or notification that a fishery is ~~overfished depleted~~, ~~overfished or otherwise depleted~~, the Council does not submit to the Secretary a fishery management plan, plan amendment, or proposed regulations required by paragraph (3)(A), the Secretary shall prepare a fishery management plan or plan amendment and any accompanying regulations to stop overfishing and rebuild affected stocks of fish within 9 months under subsection (c).
- (6) During the development of a fishery management plan, a plan amendment, or proposed regulations required by this subsection, the Council may request the Secretary to implement interim measures to reduce overfishing under section 305(c) until such measures can be replaced by such plan, amendment, or regulations. Such measures, if otherwise in compliance with the provisions of this Act, may be implemented even though they are not sufficient by themselves to stop overfishing of a fishery.
- (7) The Secretary shall review any fishery management plan, plan amendment, or regulations required by this subsection at routine intervals that may not exceed two years. If the Secretary finds as a result of the review that such plan, amendment, or regulations have not resulted in adequate progress toward ending overfishing and rebuilding affected fish stocks, the Secretary shall—
- (A) in the case of a fishery to which section 302(a)(3) applies, immediately make revisions necessary to achieve adequate progress; or
 - (B) for all other fisheries, immediately notify the appropriate Council. Such notification shall recommend further conservation and management measures which the Council should consider under paragraph (3) to achieve adequate progress.
- (8) ~~A fishery management plan, plan amendment, or proposed regulations may use alternative rebuilding strategies, including harvest control rules and fishing mortality-rate targets to the extent they are in compliance with the requirements of this Act.~~
- (9) ~~A Council may terminate the application of paragraph (3) to a fishery if the Council's scientific and statistical committee determines and the Secretary concurs that the original determination that the fishery was depleted was erroneous, either—~~
- ~~(A) within the 2-year period beginning on the effective date a fishery management plan, plan amendment, or proposed regulation for a fishery under this subsection takes effect; or~~

90 HR 4742 pages 3-5 lines 12-2. Exceptions to rebuilding times. The Council recommends exceptions due to changing environmental conditions, depletion due to international fisheries outside U.S. control, and a mixed stock exception that would rarely be instituted. The Council does not support broad exceptions that might be exercised frequently or that might weaken incentives to conserve stocks. (3/26)

91 HR 4742 page 5 lines 8-10

92 HR 4742 page 5 lines 15-19. The Council already does this.

(B) within 90 days after the completion of the next stock assessment after such determination.⁹³

(f) FISHERIES UNDER AUTHORITY OF MORE THAN ONE COUNCIL.—

- (1) Except as provided in paragraph (3)18, if any fishery extends beyond the geographical area of authority of any one Council, the Secretary may—
 - (A) designate which Council shall prepare the fishery management plan for such fishery and any amendment to such plan; or
 - (B) may require that the plan and amendment be prepared jointly by the Councils concerned.No jointly prepared plan or amendment may be submitted to the Secretary unless it is approved by a majority of the voting members, present and voting, of each Council concerned.
- (2) The Secretary shall establish the boundaries between the geographical areas of authority of adjacent Councils.

18 Former paragraph (3) now appears at section 302(a)(3) and section 304(g).

(g) ATLANTIC HIGHLY MIGRATORY SPECIES.—

- (1) PREPARATION AND IMPLEMENTATION OF PLAN OR PLAN AMENDMENT.—The Secretary shall prepare a fishery management plan or plan amendment under subsection (c) with respect to any highly migratory species fishery to which section 302(a)(3) applies. In preparing and implementing any such plan or amendment, the Secretary shall—
 - (A) consult with and consider the comments and views of affected Councils, commissioners and advisory groups appointed under Acts implementing relevant international fishery agreements pertaining to highly migratory species, and the advisory panel established under section 302(g);
 - (B) establish an advisory panel under section 302(g) for each fishery management plan to be prepared under this paragraph;
 - (C) evaluate the likely effects, if any, of conservation and management measures on participants in the affected fisheries and minimize, to the extent practicable, any disadvantage to United States fishermen in relation to foreign competitors;
 - (D) with respect to a highly migratory species for which the United States is authorized to harvest an allocation, quota, or at a fishing mortality level under a relevant international fishery agreement, provide fishing vessels of the United States with a reasonable opportunity to harvest such allocation, quota, or at such fishing mortality level;
 - (E) review, on a continuing basis (and promptly whenever a recommendation pertaining to fishing for highly migratory species has been made under a relevant international fishery agreement), and revise as appropriate, the conservation and management measures included in the plan;
 - (F) diligently pursue, through international entities (such as the International Commission for the Conservation of Atlantic Tunas), comparable international fishery management measures with respect to fishing for highly migratory species; and
 - (G) ensure that conservation and management measures under this subsection--
 - (i) promote international conservation of the affected fishery;
 - (ii) take into consideration traditional fishing patterns of fishing vessels of the United States and the operating requirements of the fisheries;
 - (iii) are fair and equitable in allocating fishing privileges among United States fishermen and

⁹³ HR 4742 page 5-6 lines 21-12. *Wording slightly changed from discussion draft. The Council recommends language specifying that stocks later determined never overfished should not be held to rebuilding provisions, a matter not specifically addressed by this draft language. (3/26)*

do not have economic allocation as the sole purpose; and

- (iv) promote, to the extent practicable, implementation of scientific research programs that include the tagging and release of Atlantic highly migratory species.

- (2) CERTAIN FISH EXCLUDED FROM “BYCATCH” DEFINITION.— Notwithstanding section 3(2), fish harvested in a commercial fishery managed by the Secretary under this subsection or the Atlantic Tunas Convention Act of 1975 (16 U.S.C. 971d), or highly migratory species harvested in a commercial fishery managed by a Council under this Act or the Western and Central Pacific Fisheries Convention Implementation Act, that are not regulatory discards and that are tagged and released alive under a scientific tagging and release program established by the Secretary shall not be considered bycatch for purposes of this Act.

(h) REPEAL OR REVOCATION OF A FISHERY MANAGEMENT PLAN.—The Secretary may repeal or revoke a fishery management plan for a fishery under the authority of a Council only if the Council approves the repeal or revocation by a three-quarters majority of the voting members of the Council.

(i) ENVIRONMENTAL REVIEW PROCESS.—⁹⁴

- (1) PROCEDURES.—The Secretary shall, in consultation with the Councils and the Council on Environmental Quality, revise and update agency procedures for compliance with the National Environmental Policy Act (42 U.S.C. 4231 et seq.). The procedures shall—
 - (A) conform to the time lines for review and approval of fishery management plans and plan amendments under this section; and
 - (B) integrate applicable environmental analytical procedures, including the time frames for public input, with the procedure for the preparation and dissemination of fishery management plans, plan amendments, and other actions taken or approved pursuant to this Act in order to provide for timely, clear and concise analysis that is useful to decision makers and the public, reduce extraneous paperwork, and effectively involve the public.
- (2) USAGE.—The updated agency procedures promulgated in accordance with this section used by the Councils or the Secretary shall be the sole environmental impact assessment procedure for fishery management plans, amendments, regulations, or other actions taken or approved pursuant to this Act.
- (3) SCHEDULE FOR PROMULGATION OF FINAL PROCEDURES.—The Secretary shall—
 - (A) propose revised procedures within 6 months after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006;
 - (B) provide 90 days for public review and comments; and
 - (C) promulgate final procedures no later than 12 months after the date of enactment of that Act.
- (4) PUBLIC PARTICIPATION.—The Secretary is authorized and directed, in cooperation with the Council on Environmental Quality and the Councils, to involve the affected public in the development of revised procedures, including workshops or other appropriate means of public involvement.

(j) INTERNATIONAL OVERFISHING.—The provisions of this subsection shall apply in lieu of subsection (e) to a fishery that the Secretary determines is ~~overfished~~ ~~depleted~~ or approaching a condition of being ~~overfished~~ ~~depleted~~ due to excessive international fishing pressure, and for which there are no management measures to end overfishing under an international agreement to which the United States is a party. For such fisheries—

- (1) the Secretary, in cooperation with the Secretary of State, ~~[sic]~~ shall immediately take appropriate action

⁹⁴ This section has never been fully implemented. Begich version requires that NMFS implement this section within 90 days of passage of the Act. (Begich p. 28 lines 2-10)

at the international level to end the overfishing; and

- (2) within 1 year after the Secretary's determination, the appropriate Council, or Secretary, for fisheries under section 302(a)(3) shall—
 - (A) develop recommendations for domestic regulations to address the relative impact of fishing vessels of the United States on the stock and, if developed by a Council, the Council shall submit such recommendations to the Secretary; and
 - (B) develop and submit recommendations to the Secretary of State, and to the Congress, for international actions that will end overfishing in the fishery and rebuild the affected stocks, taking into account the relative impact of vessels of other nations and vessels of the United States on the relevant stock.

(k) ANNUAL REPORT ON SPECIAL FUNDS --

- (1) **ANNUAL REPORT.**—Not later than 30 days after the last day of each fiscal year, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Natural Resources of the House of Representatives a report for that fiscal year on—
 - (A) the Western Pacific Sustainable Fisheries Fund established under section 204(e)(7);
 - (B) the Limited Access System Administration Fund established under section 305(h)(5)(B);
 - (C) the North Pacific Fishery Observer Fund established under section 313(d);
 - (D) the Fisheries Conservation and Management Fund established under section 208(a) of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (16 U.S.C. 1891b(a)); and
 - (E) the Fisheries Enforcement Fund established under section 311(f)(2)⁹⁵
- (2) **REQUIRED INFORMATION.**—The annual report required under paragraph (1) shall include detailed accounting of—
 - (A) all moneys in each fund at the start of the fiscal year;
 - (B) all moneys deposited in each fund during the fiscal year;
 - (C) all moneys paid out of each fund during the fiscal year; and
 - (D) all projects, programs, and activities funded by each fund during the fiscal year.⁹⁶

P.L. 109-479, sec. 104(d), MSA § 304 note 16 U.S.C. 1854 note

EFFECTIVE DATE FOR SUBSECTION (c).—The amendments made by subsection (c) shall take effect 30 months after the date of enactment of this Act.

P.L. 101-627, sec. 108(k), MSA § 304 note 16 U.S.C. 1854 note

INTERIM MANAGEMENT OF HIGHLY MIGRATORY SPECIES FISHERIES.—

Notwithstanding the amendments made by subsections (a) and (g) [of section 108 of Pub. L. 101-627], any fishery management plan or amendment which—

- (1) *addresses a highly migratory species fishery to which section 304(f)(3) of the Magnuson Fishery Conservation and Management Act (as amended by this Act [101-627]) applies,*
- (2) *was prepared by one or more Regional Fishery Management Councils, and*
- (3) *was in force and effect on January 1, 1990,*

shall remain in force and effect until superseded by a fishery management plan prepared by the Secretary, and regulations implementing that plan.

P.L. 104-297, sec. 109(h), MSA § 304 note 16 U.S.C. 1854 note

⁹⁵ *Begich page 43 edits text added by Begich page 33.*

⁹⁶ *Begich page 33 line 1 - 34 line 4. Apparently the current operation and status of these funds is unclear.*

COMPREHENSIVE MANAGEMENT SYSTEM FOR ATLANTIC PELAGIC LONGLINE FISHERY.—

- (1) *The Secretary of Commerce shall—*
 - (A) *establish an advisory panel under section 302(g)(4) of the Magnuson Fishery Conservation and Management Act, as amended by this Act, for pelagic longline fishing vessels that participate in fisheries for Atlantic highly migratory species;*
 - (B) *conduct surveys and workshops with affected fishery participants to provide information and identify options for future management programs;*
 - (C) *to the extent practicable and necessary for the evaluation of options for a comprehensive management system, recover vessel production records; and*
 - (D) *complete by January 1, 1998, a comprehensive study on the feasibility of implementing a comprehensive management system for pelagic longline fishing vessels that participate in fisheries for Atlantic highly migratory species, including, but not limited to, individual fishing quota programs and other limited access systems.*
- (2) *Based on the study under paragraph (1)(D) and consistent with the requirements of the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.), in cooperation with affected participants in the fishery, the United States Commissioners on the International Commission for the Conservation of Atlantic Tunas, and the advisory panel established under paragraph (1)(A), the Secretary of Commerce may, after October 1, 1998, implement a comprehensive management system pursuant to section 304 of such Act (16 U.S.C. 1854) for pelagic longline fishing vessels that participate in fisheries for Atlantic highly migratory species. Such a system may not implement an individual fishing quota program until after October 1, 2000.*

P.L. 104-297, sec. 109(j), MSA § 304 note 16 U.S.C. 1854 note

AMERICAN LOBSTER FISHERY.—Section 304(h) of the Magnuson Fishery Conservation and Management Act, as amended by this Act [Public Law 104-297], shall not apply to the American Lobster Fishery Management Plan.

SEC. 305. OTHER REQUIREMENTS AND AUTHORITY

16 U.S.C. 1855

(a) GEAR EVALUATION AND NOTIFICATION OF ENTRY—

- (1) Not later than 18 months after the date of enactment of the Sustainable Fisheries Act, the Secretary shall publish in the Federal Register, after notice and an opportunity for public comment, a list of all fisheries—
 - (A) under the authority of each Council and all fishing gear used in such fisheries, based on information submitted by the Councils under section 303(a); and
 - (B) to which section 302(a)(3) applies and all fishing gear used in such fisheries.
- (2) The Secretary shall include with such list guidelines for determining when fishing gear or a fishery is sufficiently different from those listed as to require notification under paragraph (3).
- (3) Effective 180 days after the publication of such list, no person or vessel may employ fishing gear or engage in a fishery not included on such list without giving 90 days advance written notice to the appropriate Council, or the Secretary with respect to a fishery to which section 302(a)(3) applies. A signed return receipt shall serve as adequate evidence of such notice and as the date upon which the 90-day period begins.
- (4) A Council may submit to the Secretary any proposed changes to such list or such guidelines the Council deems appropriate. The Secretary shall publish a revised list, after notice and an opportunity for public comment, upon receiving any such proposed changes from a Council.
- (5) A Council may request the Secretary to promulgate emergency regulations under subsection (c) to pro-

hibit any persons or vessels from using an unlisted fishing gear or engaging in an unlisted fishery if the appropriate Council, or the Secretary for fisheries to which section 302(a)(3) applies, determines that such unlisted gear or unlisted fishery would compromise the effectiveness of conservation and management efforts under this Act.

- (6) Nothing in this subsection shall be construed to permit a person or vessel to engage in fishing or employ fishing gear when such fishing or gear is prohibited or restricted by regulation under a fishery management plan or plan amendment, or under other applicable law.

(b) FISH HABITAT.—

- (1) (A) The Secretary shall, within 6 months of the date of enactment of the Sustainable Fisheries Act, establish by regulation guidelines to assist the Councils in the description and identification of essential fish habitat in fishery management plans (including adverse impacts on such habitat) and in the consideration of actions to ensure the conservation and enhancement of such habitat. The Secretary shall set forth a schedule for the amendment of fishery management plans to include the identification of essential fish habitat and for the review and updating of such identifications based on new scientific evidence or other relevant information.
(B) The Secretary, in consultation with participants in the fishery, shall provide each Council with recommendations and information regarding each fishery under that Council's authority to assist it in the identification of essential fish habitat, the adverse impacts on that habitat, and the actions that should be considered to ensure the conservation and enhancement of that habitat.
(C) The Secretary shall review programs administered by the Department of Commerce and ensure that any relevant programs further the conservation and enhancement of essential fish habitat.
(D) The Secretary shall coordinate with and provide information to other Federal agencies to further the conservation and enhancement of essential fish habitat.
- (2) Each Federal agency shall consult with the Secretary with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act.
- (3) Each Council—
 - (A) may comment on and make recommendations to the Secretary and any Federal or State agency [or tribal government](#)⁹⁷ concerning any activity authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by any Federal or State agency [or tribal government](#) that, in the view of the Council, may affect the habitat, including essential fish habitat, of a fishery resource under its authority; and
 - (B) shall comment on and make recommendations to the Secretary and any Federal or State agency [or tribal government](#) concerning any such activity that, in the view of the Council, is likely to substantially affect the habitat, including essential fish habitat, of an anadromous fishery resource under its authority.
- (4) (A) If the Secretary receives information from a Council, [or](#) Federal or State agency [or tribal government](#) or determines from other sources that an action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by any State or Federal agency [or tribal government](#) would adversely affect any essential fish habitat identified under this Act, the Secretary shall recommend to such agency measures that can be taken by such agency to conserve such habitat.
(B) Within 30 days after receiving a recommendation under subparagraph (A), a Federal agency shall provide a detailed response in writing to any Council commenting under paragraph (3)

and the Secretary regarding the matter. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on such habitat. In the case of a response that is inconsistent with the recommendations of the Secretary, the Federal agency shall explain its reasons for not following the recommendations.

(c) EMERGENCY ACTIONS AND INTERIM MEASURES.—

- (1) If the Secretary finds that an emergency or overfishing exists or that interim measures are needed to reduce overfishing for any fishery, he may promulgate emergency regulations or interim measures necessary to address the emergency or overfishing, without regard to whether a fishery management plan exists for such fishery.
- (2) If a Council finds that an emergency or overfishing exists or that interim measures are needed to reduce overfishing for any fishery within its jurisdiction, whether or not a fishery management plan exists for such fishery—
 - (A) the Secretary shall promulgate emergency regulations or interim measures under paragraph (1) to address the emergency or overfishing if the Council, by unanimous vote of the members who are voting members, requests the taking of such actions; and
 - (B) the Secretary may promulgate emergency regulations or interim measures under paragraph (1) to address the emergency or overfishing if the Council, by less than a unanimous vote, requests the taking of such action.
- (3) Any emergency regulation or interim measure which changes any existing fishery management plan or amendment shall be treated as an amendment to such plan for the period in which such regulation is in effect. Any emergency regulation or interim measure promulgated under this subsection—
 - (A) shall be published in the Federal Register together with the reasons therefor;
 - (B) shall, except as provided in subparagraph (C), remain in effect for 1 year after the date of publication, and may be extended by publication in the Federal Register for one additional period of not more than 1 year, if ~~180 days after the date of publication, and may be extended by publication in the Federal Register for one additional period of not more than 180 days, provided~~⁹⁸ the public has had an opportunity to comment on the emergency regulation or interim measure, and, in the case of a Council recommendation for emergency regulations or interim measures, the Council is actively preparing a fishery management plan, plan amendment, or proposed regulations to address the emergency or overfishing on a permanent basis;
 - (C) that responds to a public health emergency or an oil spill may remain in effect until the circumstances that created the emergency no longer exist, Provided, That the public has an opportunity to comment after the regulation is published, and, in the case of a public health emergency, the Secretary of Health and Human Services concurs with the Secretary's action; and
 - (D) may be terminated by the Secretary at an earlier date by publication in the Federal Register of a notice of termination, except for emergency regulations or interim measures promulgated under paragraph (2) in which case such early termination may be made only upon the agreement of the Secretary and the Council concerned.

(d) RESPONSIBILITY OF THE SECRETARY.—The Secretary shall have general responsibility to carry out any fishery management plan or amendment approved or prepared by him, in accordance with the provisions of this Act. The Secretary may promulgate such regulations, in accordance with section 553 of title 5, United States Code, as may be necessary to discharge such responsibility or to carry out any other provision of this Act.

(e) EFFECT OF CERTAIN LAWS ON CERTAIN TIME REQUIREMENTS.—

98 HR 4742 page 6 lines 13-19. The Council supports this provision. (3/26)

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.), the Regulatory Flexibility Act (5 U.S.C. 601 et seq.), [the National Environmental Policy Act of 1969 \(42 U.S.C. 4321 et seq.\)](#),⁹⁹ and Executive Order Numbered 12866, dated September 30, 1993, shall be complied with within the time limitations specified in subsections (a), (b), and (c) of section 304 as they apply to the functions of the Secretary under such provisions.

(f) JUDICIAL REVIEW.—

- (1) Regulations promulgated by the Secretary under this Act and actions described in paragraph (2) shall be subject to judicial review to the extent authorized by, and in accordance with, chapter 7 of title 5, United States Code, if a petition for such review is filed within 30 days after the date on which the regulations are promulgated or the action is published in the Federal Register, as applicable; except that—
 - (A) section 705 of such title is not applicable, and
 - (B) the appropriate court shall only set aside any such regulation or action on a ground specified in section 706(2)(A), (B), (C), or (D) of such title.
- (2) The actions referred to in paragraph (1) are actions that are taken by the Secretary under regulations which implement a fishery management plan, ~~including but not limited to actions that establish the date of closure of a fishery to commercial or recreational fishing.~~ [including actions that establish the date of closure of a fishery to commercial, recreational, or subsistence fishing](#)¹⁰⁰.
- (3)
 - (A) Notwithstanding any other provision of law, the Secretary shall file a response to any petition filed in accordance with paragraph (1), not later than 45 days after the date the Secretary is served with that petition, except that the appropriate court may extend the period for filing such a response upon a showing by the Secretary of good cause for that extension.
 - (B) A response of the Secretary under this paragraph shall include a copy of the administrative record for the regulations that are the subject of the petition.
- (4) Upon a motion by the person who files a petition under this subsection, the appropriate court shall assign the matter for hearing at the earliest possible date and shall expedite the matter in every possible way.

(g) NEGOTIATED CONSERVATION AND MANAGEMENT MEASURES.— (1)(A) In accordance with regulations promulgated by the Secretary pursuant to this paragraph, a Council may establish a fishery negotiation panel to assist in the development of specific conservation and management measures for a fishery under its authority. The Secretary may establish a fishery negotiation panel to assist in the development of specific conservation and management measures required for a fishery under section 304(e)(5), for a fishery for which the Secretary has authority under section 304(g), or for any other fishery with the approval of the appropriate Council.

- (B) No later than 180 days after the date of enactment of the Sustainable Fisheries Act, the Secretary shall promulgate regulations establishing procedures, developed in cooperation with the Administrative Conference of the United States, for the establishment and operation of fishery negotiation panels. Such procedures shall be comparable to the procedures for negotiated rulemaking established by subchapter III of chapter 5 of Title 5, United States Code.
- (2) If a negotiation panel submits a report, such report shall specify all the areas where consensus was reached by the panel, including, if appropriate, proposed conservation and management measures, as well as any other information submitted by members of the negotiation panel. Upon receipt, the Secretary shall publish such report in the Federal Register for public comment.
- (3) Nothing in this subsection shall be construed to require either a Council or the Secretary, whichever is

⁹⁹ *HR 4742 pages 16, lines 19-23*

¹⁰⁰ *Begich page 34 lines 18-24*

appropriate, to use all or any portion of a report from a negotiation panel established under this subsection in the development of specific conservation and management measures for the fishery for which the panel was established.

(h) CENTRAL REGISTRY SYSTEM FOR LIMITED ACCESS SYSTEM PERMITS.—

- (1) Within 6 months after the date of enactment of the Sustainable Fisheries Act, the Secretary shall establish an exclusive central registry system (which may be administered on a regional basis) for limited access system permits established under section 303(b)(6) or other Federal law, including limited access privileges, which shall provide for the registration of title to, and interests in, such permits, as well as for procedures for changes in the registration of title to such permits upon the occurrence of involuntary transfers, judicial or nonjudicial foreclosure of interests, enforcement of judgments thereon, and related matters deemed appropriate by the Secretary. Such registry system shall—
 - (A) provide a mechanism for filing notice of a nonjudicial foreclosure or enforcement of a judgment by which the holder of a senior security interest acquires or conveys ownership of a permit, and in the event of a nonjudicial foreclosure, by which the interests of the holders of junior security interests are released when the permit is transferred;
 - (B) provide for public access to the information filed under such system, notwithstanding section 402(b); and
 - (C) provide such notice and other requirements of applicable law that the Secretary deems necessary for an effective registry system.
- (2) The Secretary shall promulgate such regulations as may be necessary to carry out this subsection, after consulting with the Councils and providing an opportunity for public comment. The Secretary is authorized to contract with non-Federal entities to administer the central registry system.
- (3) To be effective and perfected against any person except the transferor, its heirs and devisees, and persons having actual notice thereof, all security interests, and all sales and other transfers of permits described in paragraph (1), shall be registered in compliance with the regulations promulgated under paragraph (2). Such registration shall constitute the exclusive means of perfection of title to, and security interests in, such permits, except for Federal tax liens thereon, which shall be perfected exclusively in accordance with the Internal Revenue Code of 1986 (26 U.S.C. 1 et seq.). The Secretary shall notify both the buyer and seller of a permit if a lien has been filed by the Secretary of the Treasury against the permit before collecting any transfer fee under paragraph (5) of this subsection.
- (4) The priority of security interests shall be determined in order of filing, the first filed having the highest priority. A validly-filed security interest shall remain valid and perfected notwithstanding a change in residence or place of business of the owner of record. For the purposes of this subsection, “security interest” shall include security interests, assignments, liens and other encumbrances of whatever kind.
- (5)
 - (A) Notwithstanding section 304(d)(1), the Secretary shall collect a reasonable fee of not more than one-half of one percent of the value of a limited access system permit upon registration of the title to such permit with the central registry system and upon the transfer of such registered title. Any such fee collected shall be deposited in the Limited Access System Administration Fund established under subparagraph (B).
 - (B) There is established in the Treasury a Limited Access System Administration Fund. The Fund shall be available, without appropriation or fiscal year limitation, only to the Secretary for the purposes of—
 - (i) administering the central registry system; and
 - (ii) administering and implementing this Act in the fishery in which the fees were collected. Sums in the Fund that are not currently needed for these purposes shall be kept on deposit or invested in obligations of, or guaranteed by, the United States.

(i) ALASKA AND WESTERN PACIFIC COMMUNITY DEVELOPMENT PROGRAMS.—

- (1) WESTERN ALASKA COMMUNITY DEVELOPMENT QUOTA PROGRAM.—
- (A) IN GENERAL.—There is established the western Alaska community development quota program in order—
- (i) to provide eligible western Alaska villages with the opportunity to participate and invest in fisheries in the Bering Sea and Aleutian Islands Management Area;
 - (ii) to support economic development in western Alaska;
 - (iii) to alleviate poverty and provide economic and social benefits for residents of western Alaska; and
 - (iv) to achieve sustainable and diversified local economies in western Alaska.
- (B) PROGRAM ALLOCATION.—
- (i) IN GENERAL.—Except as provided in clause (ii), the annual percentage of the total allowable catch, guideline harvest level, or other annual catch limit allocated to the program in each directed fishery of the Bering Sea and Aleutian Islands shall be the percentage approved by the Secretary, or established by Federal law, as of March 1, 2006, for the program. The percentage for each fishery shall be either a directed fishing allowance or include both directed fishing and nontarget needs based on existing practice with respect to the program as of March 1, 2006, for each fishery.
 - (ii) EXCEPTIONS.—Notwithstanding clause (i)—
 - (I) the allocation under the program for each directed fishery of the Bering Sea and Aleutian Islands (other than a fishery for halibut, sablefish, pollock, and crab) shall be a total allocation (directed and nontarget combined) of 10.7 percent effective January 1, 2008; and
 - (II) the allocation under the program in any directed fishery of the Bering Sea and Aleutian Islands (other than a fishery for halibut, sablefish, pollock, and crab) established after the date of enactment of this subclause shall be a total allocation (directed and nontarget combined) of 10.7 percent.

The total allocation (directed and nontarget combined) for a fishery to which subclause (I) or (II) applies may not be exceeded.
 - (iii) PROCESSING AND OTHER RIGHTS.—Allocations to the program include all processing rights and any other rights and privileges associated with such allocations as of March 1, 2006.
 - (iv) REGULATION OF HARVEST.—The harvest of allocations under the program for fisheries with individual quotas or fishing cooperatives shall be regulated by the Secretary in a manner no more restrictive than for other participants in the applicable sector, including with respect to the harvest of nontarget species.
- (C) ALLOCATIONS TO ENTITIES.—Each entity eligible to participate in the program shall be authorized under the program to harvest annually the same percentage of each species allocated to the program under subparagraph (B) that it was authorized by the Secretary to harvest of such species annually as of March 1, 2006, except to the extent that its allocation is adjusted under subparagraph (H). Such allocation shall include all processing rights and any other rights and privileges associated with such allocations as of March 1, 2006. Voluntary transfers by and among eligible entities shall be allowed, whether before or after harvesting. Notwithstanding the first sentence of this subparagraph, seven-tenths of one percent of the total allowable catch, guideline harvest level, or other annual catch limit, within the amount allocated to the program by subclause (I) or subclause (II) of subparagraph (B)(ii), shall be allocated among the eligible entities by the panel established in subparagraph (G), or allocated by the Secretary based on the nontarget needs of eligible entities in the absence of a panel decision.

- (D) ELIGIBLE VILLAGES.—The following villages shall be eligible to participate in the program through the following entities:
- (i) The villages of Akutan, Atka, False Pass, Nelson Lagoon, Nikolski, and Saint George through the Aleutian Pribilof Island Community Development Association.
 - (ii) The villages of Aleknagik, Clark's Point, Dillingham, Egegik, Ekuk, Ekwok, King Salmon/Savonoski, Levelock, Manokotak, Naknek, Pilot Point, Port Heiden, Portage Creek, South Naknek, Togiak, Twin Hills, and Ugashik through the Bristol Bay Economic Development Corporation.
 - (iii) The village of Saint Paul through the Central Bering Sea Fishermen's Association.
 - (iv) The villages of Chefnak, Chevak, Eek, Goodnews Bay, Hooper Bay, Kipnuk, Kongiganak, Kwigillingok, Mekoryuk, Napakiak, Napaskiak, Newtok, Nightmute, Oscarville, Platinum, Quinhagak, Scammon Bay, Toksook Bay, Tuntutuliak, and Tununak through the Coastal Villages Region Fund.
 - (v) The villages of Brevig Mission, Diomede, Elim, Gambell, Golovin, Koyuk, Nome, Saint Michael, Savoonga, Shaktoolik, Stebbins, Teller, Unalakleet, Wales, and White Mountain through the Norton Sound Economic Development Corporation.
 - (vi) The villages of Alakanuk, Emmonak, Grayling, Kotlik, Mountain Village, and Nunam Iqua through the Yukon Delta Fisheries Development Association.
- (E) ELIGIBILITY REQUIREMENTS FOR PARTICIPATING ENTITIES.—To be eligible to participate in the program, an entity referred to in subparagraph (D) shall meet the following requirements:
- (i) BOARD OF DIRECTORS.—The entity shall be governed by a board of directors. At least 75 percent of the members of the board shall be resident fishermen from the entity's member villages. The board shall include at least one director selected by each such member village.
 - (ii) PANEL REPRESENTATIVE.—The entity shall elect a representative to serve on the panel established by subparagraph (G).
 - (iii) OTHER INVESTMENTS.—The entity may make up to 20 percent of its annual investments in any combination of the following:
 - (I) For projects that are not fishery-related and that are located in its region.
 - (II) On a pooled or joint investment basis with one or more other entities participating in the program for projects that are not fishery-related and that are located in one or more of their regions.
 - (III) For matching Federal or State grants for projects or programs in its member villages without regard to any limitation on the Federal or State share, or restriction on the source of any non-Federal or non-State matching funds, of any grant program under any other provision of law.
 - (iv) FISHERY-RELATED INVESTMENTS.—The entity shall make the remainder percent of its annual investments in fisheries-related projects or for other purposes consistent with the practices of the entity prior to March 1, 2006.
 - (v) ANNUAL STATEMENT OF COMPLIANCE.—Each year the entity, following approval by its board of directors and signed by its chief executive officer, shall submit a written statement to the Secretary and the State of Alaska that summarizes the purposes for which it made investments under clauses (iii) and (iv) during the preceding year.
 - (vi) OTHER PANEL REQUIREMENTS.—The entity shall comply with any other requirements established by the panel under subparagraph (G).

- (F) ENTITY STATUS, LIMITATIONS, AND REGULATION.—The entity—
- (i) shall be subject to any excessive share ownership, harvesting, or processing limitations in the fisheries of the Bering Sea and Aleutian Islands Management Area only to the extent of the entity's proportional ownership, excluding any program allocations, and notwithstanding any other provision of law;
 - (ii) shall comply with State of Alaska law requiring annual reports to the entity's member villages summarizing financial operations for the previous calendar year, including general and administrative costs and compensation levels of the top 5 highest paid personnel;
 - (iii) shall comply with State of Alaska laws to prevent fraud that are administered by the Alaska Division of Banking and Securities, except that the entity and the State shall keep confidential from public disclosure any information if the disclosure would be harmful to the entity or its investments; and
 - (iv) is exempt from compliance with any State law requiring approval of financial transactions, community development plans, or amendments thereto, except as required by subparagraph (H).
- (G) ADMINISTRATIVE PANEL.—
- (i) ESTABLISHMENT.—There is established a community development quota program panel.
 - (ii) MEMBERSHIP.—The panel shall consist of 6 members. Each entity participating in the program shall select one member of the panel.
 - (iii) FUNCTIONS.—The panel shall—
 - (I) administer those aspects of the program not otherwise addressed in this paragraph, either through private contractual arrangement or through recommendations to the North Pacific Council, the Secretary, or the State of Alaska, as the case may be; and
 - (II) coordinate and facilitate activities of the entities under the program.
 - (iv) UNANIMITY REQUIRED.—The panel may act only by unanimous vote of all 6 members of the panel and may not act if there is a vacancy in the membership of the panel.
- (H) DECENNIAL REVIEW AND ADJUSTMENT OF ENTITY ALLOCATIONS.—
- (i) IN GENERAL.—During calendar year 2012 and every 10 years thereafter, the State of Alaska shall evaluate the performance of each entity participating in the program based on the criteria described in clause (ii).
 - (ii) CRITERIA.—The panel shall establish a system to be applied under this subparagraph that allows each entity participating in the program to assign relative values to the following criteria to reflect the particular needs of its villages:
 - (I) Changes during the preceding 10-year period in population, poverty level, and economic development in the entity's member villages.
 - (II) The overall financial performance of the entity, including fishery and nonfishery investments by the entity.
 - (III) Employment, scholarships, and training supported by the entity.
 - (IV) Achieving of the goals of the entity's community development plan.
 - (iii) ADJUSTMENT OF ALLOCATIONS.—After the evaluation required by clause (i), the State of Alaska shall make a determination, on the record and after an opportunity for a hearing, with respect to the performance of each entity participating in the program for the criteria described in clause (ii). If the State determines that the entity has maintained

or improved its overall performance with respect to the criteria, the allocation to such entity under the program shall be extended by the State for the next 10-year period. If the State determines that the entity has not maintained or improved its overall performance with respect to the criteria—

- (I) at least 90 percent of the entity's allocation for each species under subparagraph (C) shall be extended by the State for the next 10-year period; and
 - (II) the State may determine, or the Secretary may determine (if State law prevents the State from making the determination), and implement an appropriate reduction of up to 10 percent of the entity's allocation for each species under subparagraph (C) for all or part of such 10-year period.
- (iv) REALLOCATION OF REDUCED AMOUNT.—If the State or the Secretary reduces an entity's allocation under clause (iii), the reduction shall be reallocated among other entities participating in the program whose allocations are not reduced during the same period in proportion to each such entity's allocation of the applicable species under subparagraph (C).
- (I) SECRETARIAL APPROVAL NOT REQUIRED.—Notwithstanding any other provision of law or regulation thereunder, the approval by the Secretary of a community development plan, or an amendment thereof, under the program is not required.
- (J) COMMUNITY DEVELOPMENT PLAN DEFINED.—In this paragraph, the term 'community development plan' means a plan, prepared by an entity referred to in subparagraph (D), for the program that describes how the entity intends—
- (i) to harvest its share of fishery resources allocated to the program, or
 - (ii) to use its share of fishery resources allocated to the program, and any revenue derived from such use, to assist its member villages with projects to advance economic development, but does not include a plan that allocates fishery resources to the program.

(2)

- (A) The Western Pacific Council and the Secretary may establish a western Pacific community development program for any fishery under the authority of such Council in order to provide access to such fishery for western Pacific communities that participate in the program.
- (B) To be eligible to participate in the western Pacific community development program, a community shall—
 - (i) be located within the Western Pacific Regional Fishery Management Area;
 - (ii) meet criteria developed by the Western Pacific Council, approved by the Secretary and published in the Federal Register;
 - (iii) consist of community residents who are descended from the aboriginal people indigenous to the area who conducted commercial or subsistence fishing using traditional fishing practices in the waters of the Western Pacific region;
 - (iv) not have previously developed harvesting or processing capability sufficient to support substantial participation in fisheries in the Western Pacific Regional Fishery Management Area; and
 - (v) develop and submit a Community Development Plan to the Western Pacific Council and the Secretary.
- (C) In developing the criteria for eligible communities under subparagraph (B)(ii), the Western Pacific Council shall base such criteria on traditional fishing practices in or dependence on the fishery, the cultural and social framework relevant to the fishery, and economic barriers to access to the fishery.

- (D) For the purposes of this subsection “Western Pacific Regional Fishery Management Area” means the area under the jurisdiction of the Western Pacific Council, or an island within such area.
- (E) Notwithstanding any other provision of this Act, the Western Pacific Council shall take into account traditional indigenous fishing practices in preparing any fishery management plan.
- (3) The Secretary shall deduct from any fees collected from a community development quota program under section 304(d)(2) the costs incurred by participants in the program for observer and reporting requirements which are in addition to observer and reporting requirements of other participants in the fishery in which the allocation to such program has been made.
- (4) After the date of enactment of the Sustainable Fisheries Act, the North Pacific Council and Western Pacific Council may not submit to the Secretary a community development quota program that is not in compliance with this subsection.

(j) WESTERN PACIFIC AND NORTHERN PACIFIC REGIONAL MARINE EDUCATION AND TRAINING.—

- (1) **IN GENERAL.**—The Secretary shall establish a pilot program for regionally-based marine education and training programs in the Western Pacific and the Northern Pacific to foster understanding, practical use of knowledge (including native Hawaiian, Alaskan Native, and other Pacific Islander-based knowledge), and technical expertise relevant to stewardship of living marine resources. The Secretary shall, in cooperation with the Western Pacific and the North Pacific Regional Fishery Management Councils, regional educational institutions, and local Western Pacific and Northern Pacific community training entities, establish programs or projects that will improve communication, education, and training on marine resource issues throughout the region and increase scientific education for marine-related professions among coastal community residents, including indigenous Pacific islanders, Native Hawaiians, Alaskan Natives, and other underrepresented groups in the region.
- (2) **PROGRAM COMPONENTS.**—The program shall—
 - (A) include marine science and technology education and training programs focused on preparing community residents for employment in marine related professions, including marine resource conservation and management, marine science, marine technology, and maritime operations;
 - (B) include fisheries and seafood-related training programs, including programs for fishery observers, seafood safety and seafood marketing, focused on increasing the involvement of coastal community residents in fishing, fishery management, and seafood-related operations;
 - (C) include outreach programs and materials to educate and inform consumers about the quality and sustainability of wild fish or fish products farmed through responsible aquaculture, particularly in Hawaii, Alaska, the Western Pacific, the Northern Pacific, and the Central Pacific;
 - (D) include programs to identify, with the fishing industry, methods and technologies that will improve the data collection, quality, and reporting and increase the sustainability of fishing practices, and to transfer such methods and technologies among fisheries sectors and to other nations in the Western, Northern, and Central Pacific;
 - (E) develop means by which local and traditional knowledge (including Pacific islander, Native Hawaiian, and Alaskan Native knowledge) can enhance science-based management of fishery resources of the region; and
 - (F) develop partnerships with other Western Pacific Island and Alaskan agencies, academic institutions, and other entities to meet the purposes of this section.

(k) CONSUMER INFORMATION REGARDING SUSTAINABLY CAUGHT FISH.—

- (1) **IN GENERAL.**—The producer, processor, importer, exporter, distributor, or seller of a fish product may place the words ‘Sustainably Caught’ on the fish product and any packaging thereof if—
 - (A) the fish that comprises or is contained in the fish product meets the sustainability standard specified in paragraph (2); and

- (B) the information specified in paragraph (3) is displayed on the packaging of, or otherwise accompanies, the fish product through processing, distribution, and final sale.
- (2) SUSTAINABILITY STANDARD.—
 - (A) IN GENERAL.—For the purpose of paragraph (1)(A), fish meets the sustainability standard if—
 - (i) the fish is harvested in accordance with—
 - (I) a fishery management plan prepared and approved under this Act; or
 - (II) equivalent State, tribal, foreign, or international conservation and management measures, as determined by the Secretary;
 - (ii) the fishery from which the fish is harvested is not overfished or otherwise depleted; and
 - (iii) overfishing or other depletion is not occurring in the fishery from which the fish is harvested.
 - (B) REBUILDING FISHERIES.—A fishery that is subject to a rebuilding plan under this Act, or equivalent conservation and management measures as determined by the Secretary, meets the criteria specified in clauses (ii) and (iii) of subparagraph (A) if the Secretary determines that the plan is effectively rebuilding the fishery.
- (3) REQUIRED INFORMATION.—For the purpose of paragraph (1)(B), information is required about the fish that comprises or is contained in a fish product as follows:
 - (A) The common name.
 - (B) The scientific name.
 - (C) The country of origin.
 - (D) The Federal, State, tribal, foreign, or other entity responsible for overseeing its conservation and management or cultivation.
 - (E) If harvested from the wild—
 - (i) the country of registry of the harvesting vessel;
 - (ii) the general method of harvest; and
 - (iii) the management region.
 - (F) If cultivated—
 - (i) the country of cultivation; and
 - (ii) the method of cultivation, including whether it is produced through landbased aquaculture, ocean aquaculture, or another method.
- (4) DEFINITIONS.—In this subsection:
 - (A) The term ‘common name’ means the common name used to refer to the fish species in the fishery management plan, or equivalent measures, under which it is conserved and managed.
 - (B) The term ‘fish product’ means a fish or an item that contains fish, which has been harvested, processed, manufactured, or produced for sale or use as food.¹⁰¹

16 U.S.C. 1855, 1855 note

MSA §§ 305, 305 note

109-479

(k) MULTISPECIES GROUND FISH.—

101 Begich page 35 line 6 - page 37 line 25. In general all of the fish managed by the Council would be labeled as “sustainably caught” However, some of this labeling may be onerous to processors.

- (1) *IN GENERAL.*—Within 60 days after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Secretary of Commerce shall determine whether fishing in State waters—
 - (A) without a New England multispecies groundfish fishery permit on regulated species within the multispecies complex is not consistent with the applicable Federal fishery management plan; or
 - (B) without a Federal bottomfish and seamount groundfish permit in the Hawaiian archipelago on regulated species within the complex is not consistent with the applicable Federal fishery management plan or State data are not sufficient to make such a determination.
- (2) *CURE.*—If the Secretary makes a determination that such actions are not consistent with the plan, the Secretary shall, in consultation with the Council, and after notifying the affected State, develop and implement measures to cure the inconsistency pursuant to section 306(b).

P.L. 109-479, sec. 116(b)(2), MSA § 305 note 16 U.S.C. 1855 note

EFFECTIVE DATE.—The allocation percentage in subclause (I) of section 305(i)(1)(B)(ii) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1855(i)(1)(B)(ii)), as amended by paragraph (1) of this subsection, shall be in effect in 2007 with respect to any sector of a fishery to which such subclause applies and in which a fishing cooperative is established in 2007, and such sector's 2007 allocation shall be reduced by a pro rata amount to accomplish such increased allocation to the program. For purposes of section 305(i)(1) of that Act and of this subsection, the term "fishing cooperative" means a fishing cooperative whether or not authorized by a fishery management council or Federal agency, if a majority of the participants in the sector are participants in the fishing cooperative.

P.L. 104-297, sec. 110(e), MSA § 305 note

REGISTRY TRANSITION.—Security interests on permits described under section 305(h)(1) of the Magnuson Fishery Conservation and Management Act, as amended by this Act [104-297], that are effective and perfected by otherwise applicable law on the date of the final regulations implementing section 305(h) shall remain effective and perfected if, within 120 days after such date, the secured party submits evidence satisfactory to the Secretary of Commerce and in compliance with such regulations of the perfection of such security.

P.L. 104-297, sec. 111(b); 106-555; 109-479, sec. 207; MSA § 305 note 16 U.S.C. 1855 note

WESTERN PACIFIC DEMONSTRATION PROJECTS.—

- (1) The Secretary of Commerce is authorized to make direct grants to eligible western Pacific communities, as recommended by the Western Pacific Fishery Management Council, for the purpose of establishing fishery demonstration projects to foster and promote traditional indigenous fishing practices. There are authorized to be appropriated to carry out this section \$500,000 for each fiscal year.
- (2) Demonstration projects funded pursuant to this subsection shall foster and promote the involvement of western Pacific communities in western Pacific fisheries and may—
 - (A) identify and apply traditional indigenous fishing practices;
 - (B) develop or enhance western Pacific community-based fishing opportunities; and
 - (C) involve research, community education, or the acquisition of materials and equipment necessary to carry out any such demonstration project.
- (3)
 - (A) The Western Pacific Fishery Management Council, in consultation with the Secretary of Commerce, shall establish an advisory panel under section 302(g) of the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1852(g)) to evaluate, determine the relative merits of, and annually rank applications for such grants. The panel shall consist of not more than 8 individuals who are knowledgeable or experienced in traditional indigenous fishery practices of western Pacific communities and who are not members or employees of the Western Pacific Fishery Management Council.
 - (B) If the Secretary of Commerce or the Secretary of the Interior awards a grant for a demonstration project not in accordance with the rank given to such project by the advisory panel, the Secretary shall provide a detailed written explanation of the reasons therefor.

- (4) *The Western Pacific Fishery Management Council shall, with the assistance of such advisory panel, submit an annual report to the Congress assessing the status and progress of demonstration projects carried out under this subsection.*
- (5) *Appropriate Federal agencies may provide technical assistance to western Pacific community-based entities to assist in carrying out demonstration projects under this subsection.*
- (6) *In this subsection the term ‘Western Pacific community’ means a community eligible to participate under section 305(i)(2)(B)(i) through (iv) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1855(i)(2)(B)(i) through (iv)).*

SEC. 306. STATE JURISDICTION

16 U.S.C. 1856

(a) IN GENERAL.—

- (1) Except as provided in subsection (b), nothing in this Act shall be construed as extending or diminishing the jurisdiction or authority of any State within its boundaries.
- (2) For the purposes of this Act, except as provided in subsection (b), the jurisdiction and authority of a State shall extend
 - (A) to any pocket of waters that is adjacent to the State and totally enclosed by lines delimiting the territorial sea of the United States pursuant to the Geneva Convention on the Territorial Sea and Contiguous Zone or any successor convention to which the United States is a party;
 - (B) with respect to the body of water commonly known as Nantucket Sound, to the pocket of water west of the seventieth meridian west of Greenwich; and
 - (C) to the waters of southeastern Alaska (for the purpose of regulating fishing for other than any species of crab) that are—
 - (i) north of the line representing the international boundary at Dixon Entrance and the westward extension of that line; east of 138 degrees west longitude; and not more than three nautical miles seaward from the coast, from the lines extending from headland to headland across all bays, inlets, straits, passes, sounds, and entrances, and from any island or group of islands, including the islands of the Alexander Archipelago (except Forrester Island); or
 - (ii) between the islands referred to in clause (i) (except Forrester Island) and the mainland.
- (3) A State may regulate a fishing vessel outside the boundaries of the State in the following circumstances:
 - (A) The fishing vessel is registered under the law of that State, and (i) there is no fishery management plan or other applicable Federal fishing regulations for the fishery in which the vessel is operating; or (ii) the State's laws and regulations are consistent with the fishery management plan and applicable Federal fishing regulations for the fishery in which the vessel is operating.
 - (B) The fishery management plan for the fishery in which the fishing vessel is operating delegates management of the fishery to a State and the State's laws and regulations are consistent with such fishery management plan. If at any time the Secretary determines that a State law or regulation applicable to a fishing vessel under this circumstance is not consistent with the fishery management plan, the Secretary shall promptly notify the State and the appropriate Council of such determination and provide an opportunity for the State to correct any inconsistencies identified in the notification. If, after notice and opportunity for corrective action, the State does not correct the inconsistencies identified by the Secretary, the authority granted to the State under this subparagraph shall not apply until the Secretary and the appropriate Council find that the State has corrected the inconsistencies. For a fishery for which there was a fishery management plan in place on August 1, 1996 that did not delegate management of the fishery to a State as of that date, the authority provided by this subparagraph applies only if the Council approves the delegation

of management of the fishery to the State by a three-quarters majority vote of the voting members of the Council.

- (C) The fishing vessel is not registered under the law of the State of Alaska and is operating in a fishery in the exclusive economic zone off Alaska for which there ~~was~~ **is** no fishery management plan in place ~~on August 1, 1996~~, and the Secretary and the North Pacific Council find that there is a legitimate interest of the State of Alaska in the conservation and management of such fishery. The authority provided under this subparagraph shall terminate when a fishery management plan under this Act is approved and implemented for such fishery.

(b) EXCEPTION.—

- (1) If the Secretary finds, after notice and an opportunity for a hearing in accordance with section 554 of title 5, United States Code, that—
- (A) the fishing in a fishery, which is covered by a fishery management plan implemented under this Act, is engaged in predominately within the exclusive economic zone and beyond such zone; and
- (B) any State has taken any action, or omitted to take any action, the results of which will substantially and adversely affect the carrying out of such fishery management plan; the Secretary shall promptly notify such State and the appropriate Council of such finding and of his intention to regulate the applicable fishery within the boundaries of such State (other than its internal waters), pursuant to such fishery management plan and the regulations promulgated to implement such plan.
- (2) If the Secretary, pursuant to this subsection, assumes responsibility for the regulation of any fishery, the State involved may at any time thereafter apply to the Secretary for reinstatement of its authority over such fishery. If the Secretary finds that the reasons for which he assumed such regulation no longer prevail, he shall promptly terminate such regulation.
- (3) If the State involved requests that a hearing be held pursuant to paragraph (1), the Secretary shall conduct such hearing prior to taking any action under paragraph (1).
- (3) **Notwithstanding section 3(11), for the purposes of managing the recreational sector of the Gulf of Mexico red snapper fishery, the seaward boundary of a coastal State in the Gulf of Mexico is a line 9 miles seaward from the baseline from which the territorial sea of the United States is measured¹⁰².**

FUNDING OF STOCK ASSESSMENTS.—The Secretary of Commerce and the Secretary of the Interior, acting through the Bureau of Ocean Energy Management, shall enter into a cooperative agreement for the funding of stock assessments that are necessitated by any action by the Bureau with respect to offshore oil rigs in the Gulf of Mexico that adversely impacts red snapper.¹⁰³

(c) EXCEPTION REGARDING FOREIGN FISH PROCESSING IN INTERNAL WATERS.—

- (1) A foreign fishing vessel may engage in fish processing within the internal waters of a State if, and only if—
- (A) the vessel is qualified for purposes of this paragraph pursuant to paragraph (4)(C) or has received a permit under section 204(d);
- (B) the owner or operator of the vessel applies to the Governor of the State for, and (subject to paragraph (2)) is granted, permission for the vessel to engage in such processing and the application specifies the species to be processed; and
- (C) the owner or operator of the vessel submits reports on the tonnage of fish received from vessels

¹⁰² HR 4742 page 35.

¹⁰³ Amendment made by Rep. Southerland of Florida during markup on 5/29/14. Not clear where this should go.

of the United States and the locations from which such fish were harvested, in accordance with such procedures as the Secretary by regulation shall prescribe.

16 U.S.C. 1856, 1856 note

MSA §§ 306, 306 note

- (2) *The Governor of a State may not grant permission for a foreign fishing vessel to engage in fish processing under paragraph (1)—*
 - (A) *for a fishery which occurs in the waters of more than one State or in the exclusive economic zone, except after—*
 - (i) *consulting with the appropriate Council and Marine Fisheries Commission, and*
 - (ii) *considering any comments received from the Governor of any other State where the fishery occurs; and*
 - (B) *if the Governor determines that fish processors within the State have adequate capacity, and will utilize such capacity, to process all of the United States harvested fish from the fishery concerned that are landed in the State.*
- (3) *Nothing in this subsection may be construed as relieving a foreign fishing vessel from the duty to comply with all applicable Federal and State laws while operating within the internal waters of a State incident to permission obtained under paragraph (1)(B).*
- (4) *For purposes of this subsection—*
 - (A) *The term “fish processing” includes, in addition to processing, the performance of any other activity relating to fishing, including, but not limited to, preparation, supply, storage, refrigeration, or transportation.*
 - (B) *The phrase “internal waters of a State” means all waters within the boundaries of a State except those seaward of the baseline from which the territorial sea is measured.*
 - (C) *A foreign fishing vessel shall be treated as qualified for purposes of paragraph (1) if the foreign nation under which it is flagged will be a party to (i) a governing international fishery agreement or (ii) a treaty described in section 201(b) of this Act (16 U.S.C. 1821(b)) during the time the vessel will engage in the fish processing for which permission is sought under paragraph (1)(B).*

P.L. 109-479, sec. 302(e), MSA § 306 note 16 U.S.C. 1856 note

AUTHORITY OF STATES OF WASHINGTON, OREGON, AND CALIFORNIA TO MANAGE DUNGENESS CRAB FISHERY.

- (a) **IN GENERAL**—*Subject to the provisions of this section and notwithstanding section 306(a) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1856(a)), each of the States of Washington, Oregon, and California may adopt and enforce State laws and regulations governing fishing and processing in the exclusive economic zone adjacent to that State in any Dungeness crab (*Cancer magister*) fishery for which there is no fishery management plan in effect under that Act.*
- (b) **REQUIREMENTS FOR STATE MANAGEMENT**—*Any law or regulation adopted by a State under this section for a Dungeness crab fishery—*
 - (1) *except as provided in paragraph (2), shall apply equally to vessels engaged in the fishery in the exclusive economic zone and vessels engaged in the fishery in the waters of the State, and without regard to the State that issued the permit under which a vessel is operating;*
 - (2) *shall not apply to any fishing by a vessel in exercise of tribal treaty rights except as provided in United States v. Washington, D.C. No. CV-70-09213, United States District Court for the Western District of Washington; and*
 - (3) *shall include any provisions necessary to implement tribal treaty rights pursuant to the decision in United States v. Washington, D.C. No. CV-70-09213.*

- (c) **LIMITATION ON ENFORCEMENT OF STATE LIMITED ACCESS SYSTEMS**—Any law of the State of Washington, Oregon, or California that establishes or implements a limited access system for a Dungeness crab fishery may not be enforced against a vessel that is otherwise legally fishing in the exclusive economic zone adjacent to that State and that is not registered under the laws of that State, except a law regulating landings.
- (d) **STATE PERMIT OR TREATY RIGHT REQUIRED**—No vessel may harvest or process Dungeness crab in the exclusive economic zone adjacent to the State of Washington, Oregon, or California, except as authorized by a permit issued by any of those States or pursuant to any tribal treaty rights to Dungeness crab pursuant to the decision in *United States v. Washington*, D.C. No. CV-70- 09213.
- (e) **STATE AUTHORITY OTHERWISE PRESERVED**—Except as expressly provided in this section, nothing in this section reduces the authority of any State under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.) to regulate fishing, fish processing, or landing of fish.
- (f) **TERMINATION OF AUTHORITY**—The authority of the States of Washington, Oregon, and California under this section with respect to a Dungeness crab fishery shall expire on the effective date of a fishery management plan for the fishery under the Magnuson-Stevens Fishery Conservation and Management Act.
- (g) **REPEAL**—Section 112(d) of Public Law 104-297 (16 U.S.C. 1856 note) is repealed.
- (h) **DEFINITIONS**—The definitions set forth in section 3 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1802) shall apply to this section.
- (i) ~~**SUNSET**—This section shall have no force or effect on and after September 30, 2016.~~¹⁰⁴
- (j) Not later than December 31, 2001, and every 2 years thereafter, the Pacific State Marine Fisheries Commission shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Resources of the House of Representatives a report on the status and management of the Dungeness Crab fishery located off the coasts of the States of Washington, Oregon, and California, including—
 - (1) stock status and trends throughout its range;
 - (2) a description of applicable research and scientific review processes used to determine stock status and trends; and
 - (3) measures implemented or planned that are designed to prevent or end overfishing in the fishery.

SEC. 307. PROHIBITED ACTS

16 U.S.C. 1857

It is unlawful—

- (1) for any person—
 - (A) to violate any provision of this Act or any regulation or permit issued pursuant to this Act;
 - (B) to use any fishing vessel to engage in fishing after the revocation, or during the period of suspension, of an applicable permit issued pursuant to this Act;
 - (C) to violate any provision of, or regulation under, an applicable governing international fishery agreement entered into pursuant to section 201(c);
 - (D) to refuse to permit any officer authorized to enforce the provisions of this Act (as provided for in section 311) to board a fishing vessel subject to such person's control for the purposes of con-

¹⁰⁴ Begich: In Section 203 of Public Law 105 (State Authority for Dungeness Crab Fishery Management), subsection (i) is deleted. (This makes state authority for dungeness crab permanent). This is a Council priority.

- ducting any search or inspection in connection with the enforcement of this Act or any regulation, permit, or agreement referred to in subparagraph (A) or (C);
- (E) to forcibly assault, resist, oppose, impede, intimidate, or interfere with any such authorized officer in the conduct of any search or inspection described in subparagraph (D);
 - (F) to resist a lawful arrest for any act prohibited by this section;
 - (G) to ship, transport, offer for sale, sell, purchase, import, export, or have custody, control, or possession of, any fish taken or retained in violation of this Act or any regulation, permit, or agreement referred to in subparagraph (A) or (C);
 - (H) to interfere with, delay, or prevent, by any means, the apprehension or arrest of another person, knowing that such other person has committed any act prohibited by this section;
 - (I) to knowingly and willfully submit to a Council, the Secretary, or the Governor of a State false information (including, but not limited to, false information regarding the capacity and extent to which a United States fish processor, on an annual basis, will process a portion of the optimum yield of a fishery that will be harvested by fishing vessels of the United States) regarding any matter that the Council, Secretary, or Governor is considering in the course of carrying out this Act;
 - (J) to ship, transport, offer for sale, sell, or purchase, in interstate or foreign commerce, any whole live lobster of the species *Homarus americanus*, that—
 - (i) is smaller than the minimum possession size in effect at the time under the American Lobster Fishery Management Plan, as implemented by regulations published in part 649 of title 50, Code of Federal Regulations, or any successor to that plan implemented under this title, or in the absence of any such plan, is smaller than the minimum possession size in effect at the time under a coastal fishery management plan for American lobster adopted by the Atlantic States Marine Fisheries Commission under the Atlantic Coastal Fisheries Cooperative Management Act (16 U.S.C. 5101 et seq.);
 - (ii) is bearing eggs attached to its abdominal appendages; or
 - (iii) bears evidence of the forcible removal of extruded eggs from its abdominal appendages;
 - (K) to to [sic] steal or attempt to steal or to negligently and without authorization remove, damage, or tamper with—
 - (i) fishing gear owned by another person, which is located in the exclusive economic zone [or special areas]*, or
 - (ii) fish contained in such fishing gear;
 - (L) to forcibly assault, resist, oppose, impede, intimidate, sexually harass, bribe, or interfere with any observer on a vessel under this Act, or any data collector employed by the National Marine Fisheries Service or under contract to any person to carry out responsibilities under this Act;
 - (M) to engage in large-scale driftnet fishing that is subject to the jurisdiction of the United States, including use of a fishing vessel of the United States to engage in such fishing beyond the exclusive economic zone of any nation;
 - (N) to strip pollock of its roe and discard the flesh of the pollock;
 - (O) to knowingly and willfully fail to disclose, or to falsely disclose, any financial interest as required under section 302(j), or to knowingly vote on a Council decision in violation of section 302(j)(7)(A);
 - (P)
 - (i) to remove any of the fins of a shark (including the tail) and discard the carcass of the shark at sea;
 - (ii) to have custody, control, or possession of any such fin aboard a fishing vessel without the

corresponding carcass; or

- (iii) to land any such fin without the corresponding carcass;
- (Q) to import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce any fish taken, possessed, transported, or sold in violation of any foreign law or regulation; ~~or~~
- (R) to make or submit any incomplete, invalid, or false record, account, or label for, or any false identification of, any fish or fish product (including false identification of the species, harvesting vessel or nation, or the date or location where harvested) that has been or is intended to be imported, exported, transported, sold, offered for sale, purchased, or received in interstate or foreign commerce, except where such making or submission is prohibited under subparagraph (I);¹⁰⁵
- (S) to place on a fish product, as defined in section 305(k)(4), the words “sustainably caught” or any other word, phrase, mark, or symbol that claims or suggests that the fish that comprises or is contained in the fish product is sustainably caught if the person knows or reasonably should know—“(i) that the fish does not meet the sustainability standard under section 305(k)(2); or (ii) that the required information specified in section 305(k)(3) is false, misleading, incomplete, or not displayed on the packaging of, or otherwise accompanying, the fish product through processing, distribution, and final sale; or¹⁰⁶
- ~~(R)~~(T) to use any fishing vessel to engage in fishing in Federal or State waters, or on the high seas or in the waters of another country, after the Secretary has made a payment to the owner of that fishing vessel under section 312(b)(2).

For the purposes of subparagraph (P) there is a rebuttable presumption that any shark fins landed from a fishing vessel or found on board a fishing vessel were taken, held, or landed in violation of subparagraph (P) if the total weight of shark fins landed or found on board exceeds 5 percent of the total weight of shark carcasses landed or found on board.

- (2) for any vessel other than a vessel of the United States, and for the owner or operator of any vessel other than a vessel of the United States, to engage—
 - (A) in fishing within the boundaries of any State, except—
 - (i) recreational fishing permitted under section 201(i);
 - (ii) fish processing permitted under section 306(c); or
 - (iii) transshipment at sea of fish or fish products within the boundaries of any State in accordance with a permit approved under section 204(d);
 - (B) in fishing, except recreational fishing permitted under section 201(i), within the exclusive economic zone, or for any anadromous species or Continental Shelf fishery resources beyond such zone [or areas]*, unless such fishing is authorized by, and conducted in accordance with, a valid and applicable permit issued pursuant to section 204(b), (c) or (d); or
 - (C) except as permitted under section 306(c), in fish processing (as defined in paragraph (4)(A) of such section) within the internal waters of a State (as defined in paragraph (4)(B) of such section);
- (3) for any vessel of the United States, and for the owner or operator of any vessel of the United States, to transfer at sea directly or indirectly, or attempt to so transfer at sea, any United States harvested fish to any foreign fishing vessel, while such foreign vessel is within the exclusive economic zone [or special areas]* or within the boundaries of any State except to the extent that the foreign fishing vessel has been permitted under section 204(d) or section 306(c) to receive such fish;

¹⁰⁵ Addresses seafood fraud.

¹⁰⁶ Begich page 38-39 lines 9-9

- (4) for any fishing vessel other than a vessel of the United States to operate, and for the owner or operator of a fishing vessel other than a vessel of the United States to operate such vessel, in the exclusive economic zone [or special areas]* or within the boundaries of any State, if—
- (A) all fishing gear on the vessel is not stored below deck or in an area where it is not normally used, and not readily available, for fishing; or
- (B) all fishing gear on the vessel which is not so stored is not secured and covered so as to render it unusable for fishing;
- unless such vessel is authorized to engage in fishing in the area in which the vessel is operating; and
- (5) for any vessel of the United States, and for the owner or operator of any vessel of the United States, to engage in fishing in the waters of a foreign nation in a manner that violates an international fishery agreement between that nation and the United States that has been subject to Congressional oversight in the manner described in section 203, or any regulations issued to implement such an agreement; except that the binding provisions of such agreement and implementing regulations shall have been published in the Federal Register prior to such violation.

SEC. 308. CIVIL PENALTIES AND PERMIT SANCTIONS

16 U.S.C. 1858

- (a) **ASSESSMENT OF PENALTY.**—Any person who is found by the Secretary, after notice and an opportunity for a hearing in accordance with section 554 of title 5, United States Code, to have committed an act prohibited by section 307 shall be liable to the United States for a civil penalty. The amount of the civil penalty shall not exceed ~~\$100,000~~ **\$180,000**¹⁰⁷ for each violation. Each day of a continuing violation shall constitute a separate offense. The amount of such civil penalty shall be assessed by the Secretary, or his designee, by written notice. In determining the amount of such penalty, the Secretary shall take into account the nature, circumstances, extent, and gravity of the prohibited acts committed and, with respect to the violator, the degree of culpability, any history of prior offenses, and such other matters as justice may require. In assessing such penalty the Secretary may also consider any information provided by the violator relating to the ability of the violator to pay, Provided, That the information is served on the Secretary at least 30 days prior to an administrative hearing.
- (b) **REVIEW OF CIVIL PENALTY.**—Any person against whom a civil penalty is assessed under subsection (a) or against whom a permit sanction is imposed under subsection (g) (other than a permit suspension for nonpayment of penalty or fine) may obtain review thereof in the United States district court for the appropriate district by filing a complaint against the Secretary in such court within 30 days from the date of such order. The Secretary shall promptly file in such court a certified copy of the record upon which such violation was found or such penalty imposed, as provided in section 2112 of title 28, United States Code. The findings and order of the Secretary shall be set aside by such court if they are not found to be supported by substantial evidence, as provided in section 706(2) of title 5, United States Code.
- (c) **ACTION UPON FAILURE TO PAY ASSESSMENT.**—If any person fails to pay an assessment of a civil penalty after it has become a final and unappealable order, or after the appropriate court has entered final judgment in favor of the Secretary, the Secretary shall refer the matter to the Attorney General of the United States, who shall recover the amount assessed in any appropriate district court of the United States. In such action, the validity and appropriateness of the final order imposing the civil penalty shall not be subject to review.
- (d) **IN REM JURISDICTION.**—A fishing vessel (including its fishing gear, furniture, appurtenances, stores, and

107 Begich page 39 lines 13-14

cargo) used in the commission of an act prohibited by section 307 shall be liable in rem for any civil penalty assessed for such violation under section 308 and may be proceeded against in any district court of the United States having jurisdiction thereof. Such penalty shall constitute a maritime lien on such vessel which may be recovered in an action in rem in the district court of the United States having jurisdiction over the vessel.

- (e) **COMPROMISE OR OTHER ACTION BY SECRETARY.**—The Secretary may compromise, modify, or remit, with or without conditions, any civil penalty which is subject to imposition or which has been imposed under this section.
- (f) **SUBPOENAS.**—For the purposes of conducting any hearing under this section, [or investigation of a violation of this Act](#),¹⁰⁸ the Secretary may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and may administer oaths. Witnesses summoned shall be paid the same fees and mileage that are paid to witnesses in the courts of the United States. In case of contempt or refusal to obey a subpoena served upon any person pursuant to this subsection, the district court of the United States for any district in which such person is found, resides, or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Secretary or to appear and produce documents before the Secretary, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.
- (g) **PERMIT SANCTIONS.**—
 - (1) In any case in which (A) a vessel has been used in the commission of an act prohibited under section 307, (B) the owner or operator of a vessel or any other person who has been issued or has applied for a permit under this Act has acted in violation of section 307, (C) any amount in settlement of a civil forfeiture imposed on a vessel or other property, or any civil penalty or criminal fine imposed on a vessel or owner or operator of a vessel or any other person who has been issued or has applied for a permit under any marine resource law enforced by the Secretary has not been paid and is overdue, or (D) any payment required for observer services provided to or contracted by an owner or operator who has been issued a permit or applied for a permit under any marine resource law administered by the Secretary has not been paid and is overdue, the Secretary may—
 - (i) revoke any permit issued with respect to such vessel or person, with or without prejudice to the issuance of subsequent permits;
 - (ii) suspend such permit for a period of time considered by the Secretary to be appropriate;
 - (iii) deny such permit; or
 - (iv) impose additional conditions and restrictions on any permit issued to or applied for by such vessel or person under this Act and, with respect to foreign fishing vessels, on the approved application of the foreign nation involved and on any permit issued under that application.
 - (2) In imposing a sanction under this subsection, the Secretary shall take into account—
 - (A) the nature, circumstances, extent, and gravity of the prohibited acts for which the sanction is imposed; and
 - (B) with respect to the violator, the degree of culpability, any history of prior offenses, and such other matters as justice may require.
 - (3) Transfer of ownership of a vessel, by sale or otherwise, shall not extinguish any permit sanction that is in effect or is pending at the time of transfer of ownership. Before executing the transfer of ownership

of a vessel, by sale or otherwise, the owner shall disclose in writing to the prospective transferee the existence of any permit sanction that will be in effect or pending with respect to the vessel at the time of the transfer.

- (4) In the case of any permit that is suspended under this subsection for nonpayment of a civil penalty or criminal fine, the Secretary shall reinstate the permit upon payment of the penalty or fine and interest thereon at the prevailing rate.
- (5) No sanctions shall be imposed under this subsection unless there has been prior opportunity for a hearing on the facts underlying the violation for which the sanction is imposed, either in conjunction with a civil penalty proceeding under this section or otherwise.

SEC. 309. CRIMINAL OFFENSES

16 U.S.C. 1859

- (a) **OFFENSES.**—A person is guilty of an offense if he commits any act prohibited by— (1) section 307(1)(D), (E), (F), (H), (I), or (L); or (2) section 307(2).
- (b) **PUNISHMENT.**—Any offense described in subsection (a)(1) is punishable by a fine of not more than ~~\$100,000~~ **\$180,000**¹⁰⁹, or imprisonment for not more than 6 months, or both; except that if in the commission of any such offense the person uses a dangerous weapon, engages in conduct that causes bodily injury to any observer described in section 307(1)(L) or any officer authorized to enforce the provisions of this Act (as provided for in section 311), or places any such observer or officer in fear of imminent bodily injury, the offense is punishable by a fine of not more than \$200,000, or imprisonment for not more than 10 years, or both. Any offense described in subsection (a)(2) is punishable by a fine of not more than \$200,000.
- (c) **JURISDICTION.**—There is Federal jurisdiction over any offense described in this section.

SEC. 310. CIVIL FORFEITURES

16 U.S.C. 1860

- (a) **IN GENERAL.**—Any fishing vessel (including its fishing gear, furniture, appurtenances, stores, and cargo) used, and any fish (or the fair market value thereof) taken or retained, in any manner, in connection with or as a result of the commission of any act prohibited by section 307 (other than any act for which the issuance of a citation under section 311(c) is sufficient sanction) shall be subject to forfeiture to the United States. All or part of such vessel may, and all such fish (or the fair market value thereof) shall, be forfeited to the United States pursuant to a civil proceeding under this section.
- (b) **JURISDICTION OF DISTRICT COURTS.**—Any district court of the United States which has jurisdiction under section 311~~(d)~~**(e)** shall have jurisdiction, upon application by the Attorney General on behalf of the United States, to order any forfeiture authorized under subsection (a) and any action provided for under subsection ~~(d)~~**(e)**.
- (c) **JUDGMENT.**—If a judgment is entered for the United States in a civil forfeiture proceeding under this section, the Attorney General may seize any property or other interest declared forfeited to the United States, which has not previously been seized pursuant to this Act or for which security has not previously been obtained under subsection (d). The provisions of the customs laws relating to—
 - (1) the seizure, forfeiture, and condemnation of property for violation of the customs law;

- (2) the disposition of such property or the proceeds from the sale thereof; and
- (3) the remission or mitigation of any such forfeiture; shall apply to seizures and forfeitures incurred, or alleged to have been incurred, under the provisions of this Act, unless such provisions are inconsistent with the purposes, policy, and provisions of this Act. The duties and powers imposed upon the Commissioner of Customs or other persons under such provisions shall, with respect to this Act, be performed by officers or other persons designated for such purpose by the Secretary.

(d) PROCEDURE.—

- (1) Any officer authorized to serve any process in rem which is issued by a court having jurisdiction under section 311(d)(e) shall—
 - (A) stay the execution of such process; or
 - (B) discharge any fish seized pursuant to such process; upon the receipt of a satisfactory bond or other security from any person claiming such property. Such bond or other security shall be conditioned upon such person (i) delivering such property to the appropriate court upon order thereof, without any impairment of its value, or (ii) paying the monetary value of such property pursuant to an order of such court. Judgment shall be recoverable on such bond or other security against both the principal and any sureties in the event that any condition thereof is breached, as determined by such court. Nothing in this paragraph may be construed to require the Secretary, except in the Secretary's discretion or pursuant to the order of a court under section 311(d)(e), to release on bond any seized fish or other property or the proceeds from the sale thereof.
- (2) Any fish seized pursuant to this Act may be sold, subject to the approval and direction of the appropriate court, for not less than the fair market value thereof. The proceeds of any such sale shall be deposited with such court pending the disposition of the matter involved.

(e) REBUTTABLE PRESUMPTION.—

- (1) For purposes of this section, it shall be a rebuttable presumption that all fish found on board a fishing vessel which is seized in connection with an act prohibited by section 307 were taken and retained in violation of this Act.
- (2) For purposes of this Act, it shall be a rebuttable presumption that any fish of a species which spawns in fresh or estuarine waters and migrates to ocean waters that is found on board a vessel is of United States origin if the vessel is within the migratory range of the species during that part of the year to which the migratory range applies.
- (3) For purposes of this Act, it shall be a rebuttable presumption that any vessel that is shoreward of the outer boundary of the exclusive economic zone of the United States or beyond the exclusive economic zone of any nation, and that has gear on board that is capable of use for large-scale driftnet fishing, is engaged in such fishing.

SEC. 311. ENFORCEMENT

16 U.S.C. 1861

- (a) RESPONSIBILITY.—**The provisions of this Act shall be enforced by the Secretary and the Secretary of the department in which the Coast Guard is operating. Such Secretaries may, by agreement, on a reimbursable basis or otherwise, utilize the personnel, services, equipment (including aircraft and vessels), and facilities of any other Federal agency, including all elements of the Department of Defense, and of any State agency, in the performance of such duties.

(b) POWERS OF AUTHORIZED OFFICERS.—

- (1) Any officer who is authorized (by the Secretary, the Secretary of the department in which the Coast Guard is operating, or the head of any Federal or State agency which has entered into an agreement

with such Secretaries under subsection (a)) to enforce the provisions of this Act may—

(A) with or without a warrant or other process—

- (i) arrest any person, if he has reasonable cause to believe that such person has committed an act prohibited by section 307;
- (ii) board, and search or inspect, any fishing vessel which is subject to the provisions of this Act;
- (iii) seize any fishing vessel (together with its fishing gear, furniture, appurtenances, stores, and cargo) used or employed in, or with respect to which it reasonably appears that such vessel was used or employed in, the violation of any provision of this Act;
- (iv) seize any fish (wherever found) taken or retained in violation of any provision of this Act;
- (v) seize any other evidence related to any violation of any provision of this Act; and
- (vi) access, directly or indirectly, for enforcement purposes any data or information required to be provided under this title or regulations under this title, including data from vessel monitoring systems, satellite-based maritime distress and safety systems, or any similar system, subject to the confidentiality provisions of section 402;

(B) execute any warrant or other process issued by any court of competent jurisdiction; and

(C) exercise any other lawful authority.

- (2) Subject to the direction of the Secretary, a person charged with law enforcement responsibilities by the Secretary who is performing a duty related to enforcement of a law regarding fisheries or other marine resources may make an arrest without a warrant for an offense against the United States committed in his presence, or for a felony cognizable under the laws of the United States, if he has reasonable grounds to believe that the person to be arrested has committed or is committing a felony. The arrest authority described in the preceding sentence may be conferred upon an officer or employee of a State agency, subject to such conditions and restrictions as are set forth by agreement between the State agency, the Secretary, and, with respect to enforcement operations within the exclusive economic zone [and special areas]*, the Secretary of the department in which the Coast Guard is operating.

(c) ISSUANCE OF CITATIONS.—If any officer authorized to enforce the provisions of this Act (as provided for in this section) finds that a fishing vessel is operating or has been operated in violation of any provision of this Act, such officer may, in accordance with regulations issued jointly by the Secretary and the Secretary of the department in which the Coast Guard is operating, issue a citation to the owner or operator of such vessel in lieu of proceeding under subsection (b). If a permit has been issued pursuant to this Act for such vessel, such officer shall note the issuance of any citation under this subsection, including the date thereof and the reason therefor, on the permit. The Secretary shall maintain a record of all citations issued pursuant to this subsection.

(d) ADMINISTRATIVE ADJUDICATION.—

- (1) **IN GENERAL.**—Notwithstanding section 559 of title 5, United States Code, with respect to any marine resource conservation law or regulation administered by the Secretary acting through the National Oceanic and Atmospheric Administration, all adjudicatory functions that are required by chapter 5 of title 5, United States Code to be performed by an administrative law judge may be performed by another Federal agency on a reimbursable basis.
- (2) **DETAILS.**—If another Federal agency performing adjudicatory functions under paragraph (1) requires the detail of an administrative law judge to perform any of these functions, it may request temporary or occasional assistance from the Office of Personnel Management under section 3344 of title 5, United

(d)(e) JURISDICTION OF COURTS.—

- (1) ~~In general~~--The district courts of the United States shall have exclusive jurisdiction over any case or controversy arising under the provisions of this Act. ~~In the case of Guam or any possession of the United States in the Pacific Ocean, the appropriate court is the United States District Court for the District of Guam, except that in the case of American Samoa, the appropriate court is the United States District Court for the District of Hawaii, and except that in the case of the Northern Mariana Islands, the appropriate court is the United States District Court for the District of the Northern Mariana Islands.~~
¹¹²Any such court may, at any time—
 - ~~(1)~~(A) enter restraining orders or prohibitions;
 - ~~(2)~~(B) issue warrants, process in rem, or other process;
 - ~~(3)~~(C) prescribe and accept satisfactory bonds or other security; and
 - ~~(4)~~(D) take such other actions as are in the interest of justice.
- (2) **HAWAII AND PACIFIC INSULAR AREAS.**—In the case of Hawaii or any possession of the United States in the Pacific Ocean, the appropriate court is the United States District Court for the District of Hawaii, except that—
 - (A) in the case of Guam and Wake Island, the appropriate court is the United States District Court for the District of Guam; and
 - (B) in the case of the Northern Mariana Islands, the appropriate court is the United States District Court for the District of the Northern Mariana Islands.¹¹³
- (3) **CONSTRUCTION.**—Nothing in this section, or the amendments made by subsection (a), shall be construed to affect any case or controversy commenced, or any case or controversy pending before a district court of the United States, prior to the date of enactment of this Act.

(e)(f) PAYMENT OF STORAGE, CARE, AND OTHER COSTS.—

- (1) ~~Notwithstanding any other provision of law, IN GENERAL~~¹¹⁴--the Secretary or the Secretary of the Treasury may pay from sums received as fines, penalties, and forfeitures of property for violations of any provisions of this Act or of any other marine resource law enforced by the Secretary, including the Lacey Act Amendments of 1981 (16 U.S.C. 3371 et seq.)—
 - (A) the reasonable and necessary costs incurred in providing temporary storage, care, and maintenance of seized fish or other property pending disposition of any civil or criminal proceeding alleging a violation of any provision of this Act or any other marine resource law enforced by the Secretary with respect to that fish or other property;
 - (B) a reward of not less than 20 percent of the penalty collected or \$20,000, whichever is the lesser amount, to any person who furnishes information which leads to an arrest, conviction, civil penalty assessment, or forfeiture of property for any violation of any provision of this Act or any

110 Begich page 42 line 9 - page 43 line 2. This allows NOAA to use agencies other than the Coast Guard for administrative adjudications involving marine resources.

111 Begich: Sections 110 and 111 of title I of Division B of the Consolidated and Further Continuing Appropriations Act, 2012 (Public Law 112—55; 16 U.S.C.1861 note), and the items relating to those sections in the table of contents for that Act, are repealed.

112 Begich page 40 lines 3-15.

113 Begich page 40 line 16-page 41 line 2. This section refines jurisdiction of the courts under MSA to allow more cases arising in the waters off US territories and possessions in the Pacific to be heard in Hawaii.

114 Begich page 41 lines 12-14

other fishery resource law enforced by the Secretary;

- (C) any expenses directly related to investigations and civil or criminal enforcement proceedings, including any necessary expenses for equipment, training, travel, witnesses, and contracting services directly related to such investigations or proceedings;
 - (D) any valid liens or mortgages against any property that has been forfeited;
 - (E) claims of parties in interest to property disposed of under section 612(b) of the Tariff Act of 1930 (19 U.S.C. 1612(b)), as made applicable by section 310(c) of this Act or by any other marine resource law enforced by the Secretary, to seizures made by the Secretary, in amounts determined by the Secretary to be applicable to such claims at the time of seizure; and
 - (F) reimbursement to any Federal or State agency, including the Coast Guard, for services performed, or personnel, equipment, or facilities utilized, under any agreement with the Secretary entered into pursuant to subsection (a), or any similar agreement authorized by law.
- (2) **FISHERIES ENFORCEMENT FUND.**—There is established in the Treasury a non-interest bearing fund to be known as the Fisheries Enforcement Fund, into which shall be deposited all sums received as described in paragraph (1), which shall remain available to the Secretary of Commerce until expended as authorized in paragraph (1), without appropriation or fiscal year limitation.¹¹⁵
- ~~(2)~~(3) **Any person LIABILITY FOR COSTS INCURRED--Any person**¹¹⁶ found in an administrative or judicial proceeding to have violated this Act or any other marine resource law enforced by the Secretary shall be liable for the cost incurred in the sale, storage, care, and maintenance of any fish or other property lawfully seized in connection with the violation.

~~(f)~~(g) ENFORCEMENT OF NORTHEAST MULTISPECIES FISHERY MANAGEMENT PLAN.—

- (1) **ENFORCEMENT AGREEMENTS.**—Beginning not later than October 1, 1993, the Secretary shall, if requested by the Governor of a State represented on the New England Fishery Management Council, enter into an agreement under subsection (a), with each of the States represented on such Council, that authorizes the marine law enforcement agency of such State to perform duties of the Secretary relating to enforcement of the Northeast Multispecies Fishery Management Plan.
- (2) **REIMBURSEMENT.**—An agreement with a State under this subsection shall provide, subject to the availability of appropriations, for reimbursement of the State for expenses incurred in detection and prosecution of violations of any fishery management plan approved by the Secretary.
- (3) **COAST GUARD ENFORCEMENT WORKING GROUP.**—
 - (A) **ESTABLISHMENT.**—The Commander of the First Coast Guard District shall establish an informal fisheries enforcement working group to improve the overall compliance with and effectiveness of the regulations issued under the Northeast Multispecies Fishery Management Plan.
 - (B) **MEMBERSHIP.**—The working group shall consist of members selected by the Commander, and shall include—
 - (i) individuals who are representatives of various fishing ports located in the States represented on the New England Fishery Management Council;
 - (ii) captains of fishing vessels that operate in waters under the jurisdiction of that Council; and
 - (iii) other individuals the Commander considers appropriate.
 - (C) **NON-FEDERAL STATUS OF WORKING GROUP MEMBERS.**—An individual shall not receive any compensation for, and shall not be considered to be a Federal employee based on, member-

115 Begich page 41 line 22 - page 42 line 4. Establishes new Fisheries Enforcement Fund; compare to Hastings asset forfeiture fund in (404)(e)(1)(a), page 122 of this document

116 Begich page 41 lines 17-19

ship in the working group.

- (D) MEETINGS.—The working group shall meet, at the call of the Commander, at least four times each year. The meetings shall be held at various major fishing ports in States represented on the New England Fishery Management Council, as specified by the Commander.
- (4) USE OF FINES AND PENALTIES.—Amounts available to the Secretary under this Act which are attributable to fines and penalties imposed for violations of the Northeast Multispecies Fishery Management Plan shall be used by the Secretary pursuant to this section to enforce that Plan.

(g)(h) ENFORCEMENT IN THE PACIFIC INSULAR AREAS.—The Secretary, in consultation with the Governors of the Pacific Insular Areas and the Western Pacific Council, shall to the extent practicable support cooperative enforcement agreements between Federal and Pacific Insular Area authorities.

(h)(i) JOINT ENFORCEMENT AGREEMENTS.—

- (1) IN GENERAL.—The Governor of an eligible State may apply to the Secretary for execution of a joint enforcement agreement with the Secretary that will authorize the deputization and funding of State law enforcement officers with marine law enforcement responsibilities to perform duties of the Secretary relating to law enforcement provisions under this title or any other marine resource law enforced by the Secretary. Upon receiving an application meeting the requirements of this subsection, the Secretary may enter into a joint enforcement agreement with the requesting State.
- (2) ELIGIBLE STATE.—A State is eligible to participate in the cooperative enforcement agreements under this section if it is in, or bordering on, the Atlantic Ocean (including the Caribbean Sea), the Pacific Ocean, the Arctic Ocean, the Gulf of Mexico, Long Island Sound, or 1 or more of the Great Lakes.
- (3) REQUIREMENTS.—Joint enforcement agreements executed under paragraph (1)—
 - (A) shall be consistent with the purposes and intent of this section to the extent applicable to the regulated activities;
 - (B) may include specifications for joint management responsibilities as provided by the first section of Public Law 91–412 (15 U.S.C. 1525); and
 - (C) shall provide for confidentiality of data and information submitted to the State under section 402.
- (4) ALLOCATION OF FUNDS.—The Secretary shall include in each joint enforcement agreement an allocation of funds to assist in management of the agreement. The allocation shall be fairly distributed among all eligible States participating in cooperative enforcement agreements under this subsection, based upon consideration of Federal marine enforcement needs, the specific marine conservation enforcement needs of each participating eligible State, and the capacity of the State to undertake the marine enforcement mission and assist with enforcement needs. The agreement may provide for amounts to be withheld by the Secretary for the cost of any technical or other assistance provided to the State by the Secretary under the agreement.

(i) IMPROVED DATA SHARING.—

- (1) IN GENERAL.—Notwithstanding any other provision of this Act, as soon as practicable but no later than 21 months after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Secretary shall implement data-sharing measures to make any data required to be provided by this Act from satellite-based maritime distress and safety systems, vessel monitoring systems, or similar systems—
 - (A) directly accessible by State enforcement officers authorized under subsection (a) of this section; and
 - (B) available to a State management agency involved in, or affected by, management of a fishery if the State has entered into an agreement with the Secretary under section 402(b)(1)(B) of this Act.

- (2) AGREEMENT REQUIRED.—The Secretary shall promptly enter into an agreement with a State under section 402(b)(1)(B) of this Act if—
 - (A) the Attorney General or highest ranking legal officer of the State provides a written opinion or certification that State law allows the State to maintain the confidentiality of information required by Federal law to be kept confidential; or
 - (B) the Secretary is provided other reasonable assurance that the State can and will protect the identity or business of any person to which such information relates.

(j)(k) DEFINITIONS.23—For purposes of this section—

- (1) The term “provisions of this Act” includes (A) any regulation or permit issued pursuant to this Act, and (B) any provision of, or regulation issued pursuant to, any international fishery agreement under which foreign fishing is authorized by section 201(b) or (c), or section 204(d), with respect to fishing subject to the exclusive fishery management authority of the United States.
- (2) The term “violation of any provision of this Act” includes (A) the commission of any act prohibited by section 307, and (B) the violation of any regulation, permit, or agreement referred to in paragraph (1).

23 Section 115(e) of Public Law 104-297 “amends” ’ 311(i) of the Magnuson-Stevens Act by: (1) inserting “201(b) or (c), or section 204(d),” and (2) striking “201(b), (c).” Since ’ 311 does not include a subsection (i), the editors assume Congress intended to revise subsection (h). Since the words “201(b), (c),” do not appear in ’ 311(h), the editors assume Congress intended to strike the words “201(b) or (c).”

SEC. 312. TRANSITION TO SUSTAINABLE FISHERIES - 16 U.S.C. 1861a

(a) FISHERIES DISASTER RELIEF.—

- (1) At the discretion of the Secretary or at the request of the Governor of an affected State or a fishing community, the Secretary shall determine whether there is a commercial fishery failure due to a fishery resource disaster as a result of—
 - (A)
 - (A)(i) natural causes;
 - (B)(ii) man-made causes beyond the control of fishery managers to mitigate through conservation and management measures, including regulatory restrictions (including those imposed as a result of judicial action) imposed to protect human health or the marine environment; or
 - (C)(iii) undetermined causes.
 - (B) The Secretary shall publish the estimated cost or recovery from a fishery resource disaster no later than 30 days after the Secretary makes the determination under subparagraph (A) with respect to such disaster.¹¹⁷
- (2) The Secretary shall make a decision regarding a request from a Governor under paragraph (1) within 90 days after receiving an estimate of the economic impact of the fishery resource disaster from the entity requesting the relief.¹¹⁸
- (2)(3) Upon the determination under paragraph (1) that there is a commercial fishery failure, the Secretary is authorized to make sums available to be used by the affected State, fishing community, or by the Secretary in cooperation with the affected State or fishing community for assessing the economic and social effects of the commercial fishery failure, or any activity that the Secretary determines is appropriate to restore the fishery or prevent a similar failure in the future and to assist a fishing community affected by such failure. Before making funds available for an activity authorized under this section, the Secre-

117 Amendment made by Rep. Runyan of New Jersey at Committee markup on 5/29/14

118 Amendment made by Rep. Southerland of Florida at Committee markup on 5/29/14

tary shall make a determination that such activity will not expand the size or scope of the commercial fishery failure in that fishery or into other fisheries or other geographic regions.

- (3)(4) The Federal share of the cost of any activity carried out under the authority of this subsection shall not exceed 75 percent of the cost of that activity.
- (4)(5) There are authorized to be appropriated to the Secretary such sums as are necessary to carry out this subsection for each of the fiscal years ~~2007 through 2013~~ 2015 through 2021¹¹⁹.

(b) FISHING CAPACITY REDUCTION PROGRAM.—

- (1) The Secretary, at the request of the appropriate Council for fisheries under the authority of such Council, the Governor of a State for fisheries under State authority, or a majority of permit holders in the fishery, may conduct a voluntary fishing capacity reduction program (referred to in this section as the 'program') in a fishery if the Secretary determines that the program—
- (A) is necessary to prevent or end overfishing, rebuild stocks of fish, or achieve measurable and significant improvements in the conservation and management of the fishery;
 - (B) is consistent with the Federal or State fishery management plan or program in effect for such fishery, as appropriate, and that the fishery management plan—
 - (i) will prevent the replacement of fishing capacity removed by the program through a moratorium on new entrants, practicable restrictions on vessel upgrades, and other effort control measures, taking into account the full potential fishing capacity of the fleet; and
 - (ii) establishes a specified or target total allowable catch or other measures that trigger closure of the fishery or adjustments to reduce catch; and
 - (C) is cost-effective and, in the instance of a program involving an industry fee system, prospectively capable of repaying any debt obligation incurred under section 1111 of title XI of the Merchant Marine Act, 1936.
- (2) The objective of the program shall be to obtain the maximum sustained reduction in fishing capacity at the least cost and in a minimum period of time. To achieve that objective, the Secretary is authorized to pay—
- (A) the owner of a fishing vessel, if the permit authorizing the participation of the vessel in the fishery is surrendered for permanent revocation and the vessel owner and permit holder relinquish any claim associated with the vessel or permit that could qualify such owner or holder for any present or future limited access system permit in the fishery for which the program is established or in any other fishery and such vessel is (i) scrapped, or (ii) through the Secretary of the department in which the Coast Guard is operating, subjected to title restrictions (including loss of the vessel's fisheries endorsement) that permanently prohibit and effectively prevent its use in fishing in federal or state waters, or fishing on the high seas or in the waters of a foreign nation; or
 - (B) the holder of a permit authorizing participation in the fishery, if such permit is surrendered for permanent revocation, and such holder relinquishes any claim associated with the permit and vessel used to harvest fishery resources under the permit that could qualify such holder for any present or future limited access system permit in the fishery for which the program was established.
- (3) Participation in the program shall be voluntary, but the Secretary shall ensure compliance by all who do participate.
- (4) The harvester proponents of each program and the Secretary shall consult, as appropriate and practicable, with Councils, Federal agencies, State and regional authorities, affected fishing communities, participants in the fishery, conservation organizations, and other interested parties throughout the

development and implementation of any program under this section.

- (5) **PAYMENT CONDITION.**—The Secretary may not make a payment under paragraph (2) with respect to a vessel that will not be scrapped unless the Secretary certifies that the vessel will not be used for fishing in the waters of a foreign nation or fishing on the high seas.
- (6) **REPORT.**—
 - (A) **IN GENERAL.**—Subject to the availability of funds, the Secretary shall, within 12 months after the date of the enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 submit to the Congress a report—
 - (i) identifying and describing the 20 fisheries in United States waters with the most severe examples of excess harvesting capacity in the fisheries, based on value of each fishery and the amount of excess harvesting capacity as determined by the Secretary;
 - (ii) recommending measures for reducing such excess harvesting capacity, including the retirement of any latent fishing permits that could contribute to further excess harvesting capacity in those fisheries; and
 - (iii) potential sources of funding for such measures.
 - (B) **BASIS FOR RECOMMENDATIONS.**—The Secretary shall base the recommendations made with respect to a fishery on—
 - (i) the most cost effective means of achieving voluntary reduction in capacity for the fishery using the potential for industry financing; and
 - (ii) including measures to prevent the capacity that is being removed from the fishery from moving to other fisheries in the United States, in the waters of a foreign nation, or on the high seas.

(c) PROGRAM FUNDING.—

- (1) The program may be funded by any combination of amounts—
 - (A) available under clause (iv) of section 2(b)(1)(A) of the Act of August 11, 1939 (15 U.S.C. 713c-3(b)(1)(A); the Saltonstall-Kennedy Act);
 - (B) appropriated for the purposes of this section;
 - (C) provided by an industry fee system established under subsection (d) and in accordance with section 1111 of title XI of the Merchant Marine Act, 1936; or
 - (D) provided from any State or other public sources or private or non-profit organizations.
- (2) All funds for the program, including any fees established under subsection (d), shall be paid into the fishing capacity reduction fund established under section 1111 of title XI of the Merchant Marine Act, 1936.

(d) INDUSTRY FEE SYSTEM.—

- (1)
 - (A) If an industry fee system is necessary to fund the program, the Secretary may conduct a referendum on such system. Prior to the referendum, the Secretary shall—
 - (i) identify, to the extent practicable, and notify all permit or vessel owners who would be affected by the program; and
 - (ii) make available to such owners information about the industry fee system describing the schedule, procedures, and eligibility requirements for the referendum, the proposed program, and the amount and duration and any other terms and conditions of the proposed fee system.

- (B) The industry fee system shall be considered approved if the referendum votes which are cast in favor of the proposed system constitute at least a majority of the permit holders in the fishery, or 50 percent of the permitted allocation of the fishery, who participated in the fishery.
- (2) Notwithstanding section 304(d) and consistent with an approved industry fee system, the Secretary is authorized to establish such a system to fund the program and repay debt obligations incurred pursuant to section 1111 of title XI of the Merchant Marine Act, 1936. The fees for a program established under this section shall—
 - (A) be determined by the Secretary and adjusted from time to time as the Secretary considers necessary to ensure the availability of sufficient funds to repay such debt obligations;
 - (B) not exceed 5 percent of the ex-vessel value of all fish harvested from the fishery for which the program is established;
 - (C) be deducted by the first ex-vessel fish purchaser from the proceeds otherwise payable to the seller and accounted for and forwarded by such fish purchasers to the Secretary in such manner as the Secretary may establish, unless the Secretary determines that such fees should be collected from the seller; and
 - (D) be in effect only until such time as the debt obligation has been fully paid.

(e) IMPLEMENTATION PLAN.—

- (1) FRAMEWORK REGULATIONS.—The Secretary shall propose and adopt framework regulations applicable to the implementation of all programs under this section.
- (2) PROGRAM REGULATIONS.—The Secretary shall implement each program under this section by promulgating regulations that, together with the framework regulations, establish each program and control its implementation.
- (3) HARVESTER PROPONENTS' IMPLEMENTATION PLAN.—The Secretary may not propose implementation regulations for a program to be paid for by an industry fee system until the harvester proponents of the program provide to the Secretary a proposed implementation plan that, among other matters—
 - (A) proposes the types and numbers of vessels or permits that are eligible to participate in the program and the manner in which the program shall proceed, taking into account—
 - (i) the requirements of this section;
 - (ii) the requirements of the framework regulations;
 - (iii) the characteristics of the fishery and affected fishing communities;
 - (iv) the requirements of the applicable fishery management plan and any amendment that such plan may require to support the proposed program;
 - (v) the general needs and desires of harvesters in the fishery;
 - (vi) the need to minimize program costs; and
 - (vii) other matters, including the manner in which such proponents propose to fund the program to ensure its cost effectiveness, as well as any relevant factors demonstrating the potential for, or necessary to obtain, the support and general cooperation of a substantial number of affected harvesters in the fishery (or portion of the fishery) for which the program is intended; and
 - (B) proposes procedures for program participation (such as submission of owner bids under an auction system or fair market-value assessment), including any terms and conditions for participation, that the harvester proponents deem to be reasonably necessary to meet the program's proposed objectives.
- (4) PARTICIPATION CONTRACTS.—The Secretary shall contract with each person participating in a

program, and each such contract shall, in addition to including such other matters as the Secretary deems necessary and appropriate to effectively implement each program (including penalties for contract nonperformance) be consistent with the framework and implementing regulations and all other applicable law.

- (5) **REDUCTION AUCTIONS.**—Each program not involving fair market assessment shall involve a reduction auction that scores the reduction price of each bid offer by the data relevant to each bidder under an appropriate fisheries productivity factor. If the Secretary accepts bids, the Secretary shall accept responsive bids in the rank order of their bid scores, starting with the bid whose reduction price is the lowest percentage of the productivity factor, and successively accepting each additional responsive bid in rank order until either there are no more responsive bids or acceptance of the next bid would cause the total value of bids accepted to exceed the amount of funds available for the program.
- (6) **BID INVITATIONS.**—Each program shall proceed by the Secretary issuing invitations to bid setting out the terms and conditions for participation consistent with the framework and implementing regulations. Each bid that the Secretary receives in response to the invitation to bid shall constitute an irrevocable offer from the bidder.

SEC. 313. NORTH PACIFIC FISHERIES CONSERVATION

16 U.S.C. 1862

- (a) **IN GENERAL.**—The North Pacific Council may prepare, in consultation with the Secretary, a fisheries research plan for any fishery under the Council's jurisdiction, except a salmon fishery, **that which**—
 - (1) requires that **electronic monitoring systems or**¹²⁰ observers be stationed on fishing vessels engaged in the catching, taking, or harvesting of fish and on United States fish processors fishing for or processing species under the jurisdiction of the Council, including the Northern Pacific halibut fishery, for the purpose of collecting data necessary for the conservation, management, and scientific understanding of any fisheries under the Council's jurisdiction; and
 - ~~(2) establishes a system, or system [sic], of fees, which may vary by fishery, management area, or observer coverage level, to pay for the cost of implementing the plan.~~
 - (2) **establish a system of fees to pay for the cost of implementing the plan and any integrated data collection program, including electronic monitoring, established under subsections (a)(15) and (e) of section 303**¹²¹
- (b) **STANDARDS.**—
 - (1) Any plan or plan amendment prepared under this section shall be reasonably calculated to—
 - (A) gather reliable data, by **placing electronic monitoring systems or**¹²² stationing observers on all or a statistically reliable sample of the fishing vessels and United States fish processors included in the plan, necessary for the conservation, management, and scientific understanding of the fisheries covered by the plan;
 - (B) be fair and equitable to all vessels and processors;
 - (C) be consistent with applicable provisions of law; and
 - (D) take into consideration the operating requirements of the fisheries and the safety of observers and fishermen.
 - (2) Any system of fees established under this section shall—

120 Begich page 44 lines 22-24. Allows electronic monitoring in lieu of human observers

121 Begich page 45 lines 3-7

122 Begich page 45 lines 9-11. Same

- (A) provide that the total amount of fees collected under this section not exceed the combined cost of (i) stationing observers, or electronic monitoring systems, on board fishing vessels and United States fish processors, (ii) the actual cost of inputting collected data, and (iii) assessments necessary for a risk-sharing pool implemented under subsection (e) of this section, less any amount received for such purpose from another source or from an existing surplus in the North Pacific Fishery Observer Fund established in subsection (d) of this section;
- (B) be fair and equitable to all participants in the fisheries under the jurisdiction of the Council, including the Northern Pacific halibut fishery;
- (C) provide that fees collected not be used to pay any costs of administrative overhead or other costs not directly incurred in carrying out the plan;
- (D) not be used to offset amounts authorized under other provisions of law;
- (E) be expressed as a fixed amount reflecting **actual electronic monitoring system costs or**¹²³ actual observer costs as described in subparagraph (A) or a percentage, not to exceed 2 percent, of the unprocessed ex-vessel value of the fish and shellfish harvested under the jurisdiction of the Council, including the Northern Pacific halibut fishery;
- (F) be assessed against some or all fishing vessels and United States fish processors, including those not required to carry an observer or an electronic monitoring system under the plan, participating in fisheries under the jurisdiction of the Council, including the Northern Pacific halibut fishery;
- (G) provide that fees collected will be deposited in the North Pacific Fishery Observer Fund established under subsection (d) of this section;
- (H) provide that fees collected will only be used for implementing the plan established under this section;
- (I) provide that fees collected will be credited against any fee for stationing observers or electronic monitoring systems on board fishing vessels and United States fish processors and the actual cost of inputting collected data to which a fishing vessel or fish processor is subject under section 304(d) of this Act; and
- (J) meet the requirements of section 9701(b) of title 31, United States Code.

(3) **Any system of fees established under this section may vary by fishery, management area, electronic monitoring system, or observer coverage level.**¹²⁴

(c) ACTION BY SECRETARY.—

- (1) Within 60 days after receiving a plan or plan amendment from the North Pacific Council under this section, the Secretary shall review such plan or plan amendment and either (A) remand such plan or plan amendment to the Council with comments if it does not meet the requirements of this section, or (B) publish in the Federal Register proposed regulations for implementing such plan or plan amendment.
- (2) During the 60-day public comment period, the Secretary shall conduct a public hearing in each State represented on the Council for the purpose of receiving public comments on the proposed regulations.
- (3) Within 45 days of the close of the public comment period, the Secretary, in consultation with the Council, shall analyze the public comment received and publish final regulations for implementing such plan.
- (4) If the Secretary remands a plan or plan amendment to the Council for failure to meet the requirements

¹²³ Begich page 45 lines 12-14

¹²⁴ Begich page 45 lines 16-19

of this section, the Council may resubmit such plan or plan amendment at any time after taking action the Council believes will address the defects identified by the Secretary. Any plan or plan amendment resubmitted to the Secretary will be treated as an original plan submitted to the Secretary under paragraph (1) of this subsection.

(d) FISHERY OBSERVER FUND.—There is established in the Treasury a North Pacific Fishery Observer Fund. The Fund shall be available, without appropriation or fiscal year limitation, only to the Secretary for the purpose of carrying out the provisions of this section, subject to the restrictions in subsection (b)(2) of this section. The Fund shall consist of all monies deposited into it in accordance with this section. Sums in the Fund that are not currently needed for the purposes of this section shall be kept on deposit or invested in obligations of, or guaranteed by, the United States.

(e) SPECIAL PROVISIONS REGARDING OBSERVERS.—

- (1) The Secretary shall review—
 - (A) the feasibility of establishing a risk sharing pool through a reasonable fee, subject to the limitations of subsection (b)(2)(E) of this section, to provide coverage for vessels and owners against liability from civil suits by observers, and
 - (B) the availability of comprehensive commercial insurance for vessel and owner liability against civil suits by observers.
- (2) If the Secretary determines that a risk sharing pool is feasible, the Secretary shall establish such a pool, subject to the provisions of subsection (b)(2) of this section, unless the Secretary determines that—
 - (A) comprehensive commercial insurance is available for all fishing vessels and United States fish processors required to have observers under the provisions of this section, and
 - (B) such comprehensive commercial insurance will provide a greater measure of coverage at a lower cost to each participant.

(f) BYCATCH REDUCTION.—In implementing section 303(a)(11) and this section, the North Pacific Council shall submit conservation and management measures to lower, on an annual basis for a period of not less than four years, the total amount of economic discards occurring in the fisheries under its jurisdiction.

(g) BYCATCH REDUCTION INCENTIVES.—

- (1) Notwithstanding section 304(d), the North Pacific Council may submit, and the Secretary may approve, consistent with the provisions of this Act, a system of fines in a fishery to provide incentives to reduce bycatch and bycatch rates; except that such fines shall not exceed \$25,000 per vessel per season. Any fines collected shall be deposited in the North Pacific Fishery Observer Fund, and may be made available by the Secretary to offset costs related to the reduction of bycatch in the fishery from which such fines were derived, including conservation and management measures and research, and to the State of Alaska to offset costs incurred by the State in the fishery from which such penalties were derived or in fisheries in which the State is directly involved in management or enforcement and which are directly affected by the fishery from which such penalties were derived.
- (2)
 - (A) Notwithstanding section 303~~(d)~~(A)¹²⁵, and in addition to the authority provided in section 303(b)(10), the North Pacific Council may submit, and the Secretary may approve, conservation and management measures which provide allocations of regulatory discards to individual fishing vessels as an incentive to reduce per vessel bycatch and bycatch rates in a fishery, Provided, That—

- (i) such allocations may not be transferred for monetary consideration and are made only on an annual basis; and
 - (ii) any such conservation and management measures will meet the requirements of subsection (h) and will result in an actual reduction in regulatory discards in the fishery.
- (B) The North Pacific Council may submit restrictions in addition to the restriction imposed by clause (i) of subparagraph (A) on the transferability of any such allocations, and the Secretary may approve such recommendation.

(h) CATCH MEASUREMENT.—

- (1) By June 1, 1997 the North Pacific Council shall submit, and the Secretary may approve, consistent with the other provisions of this Act, conservation and management measures to ensure total catch measurement in each fishery under the jurisdiction of such Council. Such measures shall ensure the accurate enumeration, at a minimum, of target species, economic discards, and regulatory discards.
- (2) To the extent the measures submitted under paragraph (1) do not require United States fish processors and fish processing vessels (as defined in chapter 21 of title 46, United States Code) to weigh fish, the North Pacific Council and the Secretary shall submit a plan to the Congress by January 1, 1998, to allow for weighing, including recommendations to assist such processors and processing vessels in acquiring necessary equipment, unless the Council determines that such weighing is not necessary to meet the requirements of this subsection.

(i) FULL RETENTION AND UTILIZATION.—

- (1) The North Pacific Council shall submit to the Secretary by October 1, 1998 a report on the advisability of requiring the full retention by fishing vessels and full utilization by United States fish processors of economic discards in fisheries under its jurisdiction if such economic discards, or the mortality of such economic discards, cannot be avoided. The report shall address the projected impacts of such requirements on participants in the fishery and describe any full retention and full utilization requirements that have been implemented.
- (2) The report shall address the advisability of measures to minimize processing waste, including standards setting minimum percentages which must be processed for human consumption. For the purpose of the report, 'processing waste' means that portion of any fish which is processed and which could be used for human consumption or other commercial use, but which is not so used.

(j) BERING SEA AND ALEUTIAN ISLANDS CRAB RATIONALIZATION.

- (1) By not later than January 1, 2005, the Secretary shall approve and hereafter implement by regulation the Voluntary Three-Pie Cooperative Program for crab fisheries of the Bering Sea and Aleutian Islands approved by the North Pacific Fishery Management Council between June 2002 and April 2003, and all trailing amendments including those reported to Congress on May 6, 2003. This section shall not preclude the Secretary from approving by January 1, 2005, and implementing any subsequent program amendments approved by the Council.
- (2) Notwithstanding any other provision of this Act, in carrying out paragraph (1) the Secretary shall approve all parts of the Program referred to in such paragraph. Further, no part of such Program may be implemented if, as approved by the North Pacific Fishery Management Council, individual fishing quotas, processing quotas, community development quota allocation, voluntary cooperatives, binding arbitration, regional landing and processing requirements, community protections, economic data collection, or the loan program for crab fishing vessel captains and crew members, is invalidated subject to a judicial determination not subject to judicial appeal. If the Secretary determines that a processor has leveraged its Individual Processor Quota shares to acquire a harvesters open-delivery "B shares", the processor's Individual Processor Quota shares shall be forfeited.
- (3) Subsequent to implementation pursuant to paragraph (1), the Council may submit and the Secretary

may implement changes to or repeal of conservation and management measures, including measures authorized in this section, for crab fisheries of the Bering Sea and Aleutian Islands in accordance with applicable law, including this Act as amended by this subsection, to achieve on a continuing basis the purposes identified by the Council.

- (4) The loan program referred to in paragraph (2) shall be carried out pursuant to the authority of sections 1111 and 1112 of title XI of the Merchant Marine Act, 1936 (46 U.S.C. App. 1279f, 1279g).
- (5) For purposes of implementing this section \$ 1,000,000 shall be made available each year until fully implemented from funds otherwise made available to the National Marine Fisheries Service for Alaska fisheries activities.
- (6) Nothing in this Act shall constitute a waiver, either express or implied, of the antitrust laws of the United States. The Secretary, in consultation with the Department of Justice and the Federal Trade Commission, shall develop and implement a mandatory information collection and review process to provide any and all information necessary for the Department of Justice and the Federal Trade Commission to determine whether any illegal acts of anti-competition, anti-trust, or price collusion have occurred among persons receiving individual processing quotas under the Program. The Secretary may revoke any individual processing quota held by any person found to have violated a provision of the antitrust laws of the United States.
- (7) An individual processing quota issued under the Program shall be considered a permit for the purposes of sections 307, 308, and 309, and may be revoked or limited at any time in accordance with this Act. Issuance of an individual processing quota under the program shall not confer any right of compensation to the holder of such individual processing quota if it is revoked or limited and shall not create, or be construed to create, any right, title, or interest in or to any fish before the fish is purchased from an individual fishing quota holder.
- (8) The restriction on the collection of economic data in section 303 shall not apply with respect to any fish processor who is eligible for, or who has received, individual processing quota under the Program. The restriction on the disclosure of information in section 402(b)(1) shall not apply when the information is used to determine eligibility for or compliance with an individual processing quota program.
- (9) The provisions of sections 308, 310, and 311 shall apply to the processing facilities and fish products of any person holding individual processing quota, and the provisions of subparagraphs (D), (E), and (L) of section 307(l) shall apply to any facility owned or controlled by a person holding individual processing quota.

(k) ARCTIC COMMUNITY DEVELOPMENT QUOTA.—If the North Pacific Fishery Management Council issues a fishery management plan for the exclusive economic zone in the Arctic Ocean, or an amendment to its current Fishery Management Plan for Fish Resources of the Arctic Management Area, that makes available to commercial fishing and establishes a sustainable harvest level for any part of such zone, the North Pacific Fishery Management Council shall set aside not less than 10 percent of the total allowable catch therein as a community development quota for coastal villages north and east of the Bering Strait¹²⁶.

SEC. 314. NORTHWEST ATLANTIC OCEAN FISHERIES REINVESTMENT PROGRAM

16 U.S.C. 1863

(a) PROGRAM.—

- (1) Not later than October 1, 1993, the Secretary shall establish a Northwest Atlantic Ocean Fisheries Reinvestment Program for the purposes of—

126 Begich page 45-46 lines 20-8. Allows new community development quota in NPFMC region

- (A) promoting development of commercial fisheries and markets for underutilized species of the northwest Atlantic Ocean;
 - (B) developing alternative fishing opportunities for participants in the New England groundfish fishery;
 - (C) providing technical support and assistance to United States fishermen and fish processors to improve the value-added processing of underutilized species and to make participation in fisheries for underutilized species of the northwest Atlantic Ocean economically viable;
 - (D) creating new economic opportunities through the improved processing and expanded use of fish waste; and
 - (E) helping to restore ~~overfished~~ ~~depleted~~ New England groundfish stocks through aquaculture or hatchery programs.
- (2) **CONSULTATION.**—In establishing and implementing the Northwest [sic] Fisheries Reinvestment Program, the Secretary shall consult with representatives of the commercial fishing industry, the seafood processing industry, and the academic community (including the National Sea Grant Program).
 - (3) **ACTIVITIES UNDER PROGRAM.**—Subject to the availability of appropriations, the Secretary shall award contracts, grants and other financial assistance to United States citizens to carry out the purposes of subsection (1), under the terms and conditions provided in section 2(c) of the Act of August 11, 1939 (15 U.S.C. 713(c)-3(c); commonly referred to as the “Saltonstall-Kennedy Act”), except that, in making awards under this section for projects involving participation in fisheries for underutilized species, the Secretary shall give the highest priority to a person who owns or operates a fishing vessel permitted under this Act to participate in the New England groundfish fishery who agrees to surrender that permit to the Secretary during the duration of the contract, grant or other assistance.
 - (4) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated \$5,000,000 for each of fiscal years 1993 through 1999 to carry out the purposes of this section. For fiscal year 1993 no more than \$1,000,000, and for fiscal year 1994 no more than \$2,000,000, of such funds may be provided from monies made available under section 2(b) of the Act of August 11, 1939 (15 U.S.C. 713c-3(b)).
- (b) **ASSISTANCE OF OTHER AGENCIES.**—The Secretary shall actively seek the assistance of other Federal agencies in the development of fisheries for underutilized species of the northwest Atlantic Ocean, including, to the extent permitted by other applicable laws, assistance from the Secretary of Agriculture in including such underutilized species as agricultural commodities in the programs of the Foreign Agricultural Service for which amounts are authorized under the Food, Agriculture, Conservation, and Trade Act of 1990 (Public Law 101-624; 104 Stat. 3359).
 - (c) **MANAGEMENT PLANS FOR UNDERUTILIZED SPECIES.**—The New England Fishery Management Council, in consultation with other appropriate Councils, shall develop fishery management plans as soon as possible for any underutilized species of the northwest Atlantic Ocean that is not covered under such a plan, in order to prevent overfishing of that species.
 - (d) **UNDERUTILIZED SPECIES DEFINED.**—For purposes of this section, the term “underutilized species of the northwest Atlantic Ocean” means any fish species of the northwest Atlantic Ocean that is identified, by the Director of the Northeast Fisheries Center of the National Marine Fisheries Service, as an underutilized species.

SEC. 315. REGIONAL COASTAL DISASTER ASSISTANCE, TRANSITION, AND RECOVERY PROGRAM

16 U.S.C. 1864

- (a) **IN GENERAL.**—When there is a catastrophic regional fishery disaster the Secretary may, upon the request of, and in consultation with, the Governors of affected States, establish a regional economic transition

program to provide immediate disaster relief assistance to the fishermen, charter fishing operators, United States fish processors, and owners of related fishery infrastructure affected by the disaster.

(b) PROGRAM COMPONENTS.—

- (1) **IN GENERAL.**—Subject to the availability of appropriations, the program shall provide funds or other economic assistance to affected entities, or to governmental entities for disbursement to affected entities, for—
 - (A) meeting immediate regional shoreside fishery infrastructure needs, including processing facilities, cold storage facilities, ice houses, docks, including temporary docks and storage facilities, and other related shoreside fishery support facilities and infrastructure while ensuring that those projects will not result in an increase or replacement of fishing capacity;
 - (B) financial assistance and job training assistance for fishermen who wish to remain in a fishery in the region that may be temporarily closed as a result of environmental or other effects associated with the disaster;
 - (C) funding, pursuant to the requirements of section 312(b), to fishermen who are willing to scrap a fishing vessel and permanently surrender permits for fisheries named on that vessel; and
 - (D) any other activities authorized under section 312 of this Act or section 308(d) of the Interjurisdictional Fisheries Act of 1986 (16 U.S.C. 4107(d)).
- (2) **JOB TRAINING.**—Any fisherman who decides to scrap a fishing vessel under the program shall be eligible for job training assistance.
- (3) **STATE PARTICIPATION OBLIGATION.**—The participation by a State in the program shall be conditioned upon a commitment by the appropriate State entity to ensure that the relevant State fishery meets the requirements of section 312(b) of this Act to ensure excess capacity does not re-enter the fishery.
- (4) **NO MATCHING REQUIRED.**—The Secretary may waive the matching requirements of section 312 of this Act, section 308 of the Interjurisdictional Fisheries Act of 1986 (16 U.S.C. 4107), and any other provision of law under which the Federal share of the cost of any activity is limited to less than 100 percent if the Secretary determines that—
 - (A) no reasonable means are available through which applicants can meet the matching requirement; and
 - (B) the probable benefit of 100 percent Federal financing outweighs the public interest in imposition of the matching requirement.
- (5) **NET REVENUE LIMIT INAPPLICABLE.**—Section 308(d)(3) of the Interjurisdictional Fisheries Act (16 U.S.C. 4107(d)(3)) shall not apply to assistance under this section.

(c) REGIONAL IMPACT EVALUATION.—Within 2 months after a catastrophic regional fishery disaster the Secretary shall provide the Governor of each State participating in the program a comprehensive economic and socio-economic evaluation of the affected region’s fisheries to assist the Governor in assessing the current and future economic viability of affected fisheries, including the economic impact of foreign fish imports and the direct, indirect, or environmental impact of the disaster on the fishery and coastal communities.

(d) CATASTROPHIC REGIONAL FISHERY DISASTER DEFINED.—In this section the term ‘catastrophic regional fishery disaster’ means a natural disaster, including a hurricane or tsunami, or a regulatory closure (including regulatory closures resulting from judicial action) to protect human health or the marine environment, that—

- (1) results in economic losses to coastal or fishing communities;
- (2) affects more than 1 State or a major fishery managed by a Council or interstate fishery commission; and

- (3) is determined by the Secretary to be a commercial fishery failure under section 312(a) of this Act or a fishery resource disaster or section 308(d) of the Interjurisdictional Fisheries Act of 1986 (16 U.S.C. 4107(d)).

P.L. 109-479, sec. 115 16 U.S.C. 1864 note

FISHERIES HURRICANE ASSISTANCE PROGRAM.

- (a) *IN GENERAL.—The Secretary of Commerce shall establish an assistance program for the Gulf of Mexico commercial and recreational fishing industry.*
- (b) *ALLOCATION OF FUNDS.—Under the program, the Secretary shall allocate funds appropriated to carry out the program among the States of Alabama, Louisiana, Florida, Mississippi, and Texas in proportion to the percentage of the fishery (including crawfish) catch landed by each State before August 29, 2005, except that the amount allocated to Florida shall be based exclusively on the proportion of such catch landed by the Florida Gulf Coast fishery.*
- (c) *USE OF FUNDS.—Of the amounts made available to each State under the program—*
- (1) *2 percent shall be retained by the State to be used for the distribution of additional payments to fishermen with a demonstrated record of compliance with turtle excluder and bycatch reduction device regulations; and*
- (2) *the remainder of the amounts shall be used for—*
- (A) *personal assistance, with priority given to food, energy needs, housing assistance, transportation fuel, and other urgent needs;*
- (B) *assistance for small businesses, including fishermen, fish processors, and related businesses serving the fishing industry;*
- (C) *domestic product marketing and seafood promotion;*
- (D) *State seafood testing programs;*
- (E) *the development of limited entry programs for the fishery;*
- (F) *funding or other incentives to ensure widespread and proper use of turtle excluder devices and bycatch reduction devices in the fishery; and*
- (G) *voluntary capacity reduction programs for shrimp fisheries under limited access programs.*
- (d) *AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary of Commerce \$17,500,000 for each of fiscal years 2007 through 2012 to carry out this section.*

SEC. 316. BYCATCH REDUCTION ENGINEERING PROGRAM

16 U.S.C. 1865

- (a) **BYCATCH REDUCTION ENGINEERING PROGRAM.**—Not later than 1 year after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Secretary, in cooperation with the Councils and other affected interests, and based upon the best scientific information available, shall establish a bycatch reduction program, including grants, to develop technological devices and other conservation engineering changes designed to minimize bycatch, seabird interactions, bycatch mortality, and post-release mortality in Federally managed fisheries. The program shall—
- (1) be regionally based;
- (2) be coordinated with projects conducted under the cooperative research and management program established under this Act;
- (3) provide information and outreach to fishery participants that will encourage adoption and use of technologies developed under the program; and

- (4) provide for routine consultation with the Councils in order to maximize opportunities to incorporate results of the program in Council actions and provide incentives for adoption of methods developed under the program in fishery management plans developed by the Councils.
- (b) INCENTIVES.—Any fishery management plan prepared by a Council or by the Secretary may establish a system of incentives to reduce total bycatch and seabird interactions, amounts, bycatch rates, and post-release mortality in fisheries under the Council’s or Secretary’s jurisdiction, including—**
 - (1) measures to incorporate bycatch into quotas, including the establishment of collective or individual bycatch quotas;
 - (2) measures to promote the use of gear with verifiable and monitored low bycatch and seabird interactions, rates; and
 - (3) measures that, based on the best scientific information available, will reduce bycatch and seabird interactions, bycatch mortality, post-release mortality, or regulatory discards in the fishery.
- (c) COORDINATION ON SEABIRD INTERACTIONS.—The Secretary, in coordination with the Secretary of Interior, is authorized to undertake projects in cooperation with industry to improve information and technology to reduce seabird bycatch, including—**
 - (1) outreach to industry on new technologies and methods;
 - (2) projects to mitigate for seabird mortality; and
 - (3) actions at appropriate international fishery organizations to reduce seabird interactions in fisheries.
- (d) REPORT.—The Secretary shall transmit an annual report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Resources that—**
 - (1) describes funding provided to implement this section;
 - (2) describes developments in gear technology achieved under this section; and
 - (3) describes improvements and reduction in bycatch and seabird interactions associated with implementing this section, as well as proposals to address remaining bycatch or seabird interaction problems.

SEC. 317. SHARK FEEDING

16 U.S.C. 1866

Except to the extent determined by the Secretary, or under State law, as presenting no public health hazard or safety risk, or when conducted as part of a research program funded in whole or in part by appropriated funds, it is unlawful to introduce, or attempt to introduce, food or any other substance into the water to attract sharks for any purpose other than to harvest sharks within the Exclusive Economic Zone seaward of the State of Hawaii and of the Commonwealths, territories, and possessions of the United States in the Pacific Ocean Area.

SEC. 318. COOPERATIVE RESEARCH AND MANAGEMENT PROGRAM

16 U.S.C. 1867

(a) IN GENERAL.—

- (1) The Secretary of Commerce, in consultation with the Councils, shall establish a cooperative research and management program to address needs identified under this Act and under any other marine resource laws enforced by the Secretary. The program shall be implemented on a regional basis and shall be developed and conducted through partnerships among Federal, State, and Tribal managers and scientists (including interstate fishery commissions), fishing industry participants (including use of commercial charter or recreational vessels for gathering data), and educational institutions.
- (2) *Within one year after the date of enactment of the Strengthening Fishing Communities and Increasing*

Flexibility in Fisheries Management Act, and after consultation with the Councils, the Secretary shall publish a plan for implementing and conducting the program established in paragraph (1). Such plan shall identify and describe critical regional fishery management and research needs, possible projects that may address those needs, and estimated costs for such projects. The plan shall be revised and updated every 5 years, and updated plans shall include a brief description of projects that were funded in the prior 5-year period and the research and management needs that were addressed by those projects¹²⁷.

- (b) **ELIGIBLE PROJECTS.**—The Secretary shall make funds available under the program for the support of projects to address critical needs identified by the Councils in consultation with the Secretary. The program shall promote and encourage efforts to utilize sources of data maintained by other Federal agencies, State agencies, or academia for use in such projects.
- (c) **FUNDING PRIORITIES.**—In making funds available the Secretary shall award funding on a competitive basis and based on regional fishery management needs, select programs that form part of a coherent program of research focused on solving priority issues identified by the Councils, and shall give priority to the following projects:
- (1) Projects to collect data to improve, supplement, or enhance stock assessments, including— ~~the use of fishing vessels or acoustic or other marine technology:~~
 - (A) the use of fishing vessels or acoustic or other marine technology;
 - (B) expanding the use of electronic catch reporting programs and technology; and
 - (C) improving monitoring and observer coverage through the expanded use of electronic monitoring devices.¹²⁸
 - (2) Projects to assess the amount and type of bycatch or post-release mortality occurring in a fishery.
 - (3) Conservation engineering projects designed to reduce bycatch, including avoidance of post-release mortality, reduction of bycatch in high seas fisheries, and transfer of such fishing technologies to other nations.
 - (4) Projects for the identification of habitat areas of particular concern and for habitat conservation.
 - (5) Projects designed to collect and compile economic and social data.
- (d) **EXPERIMENTAL PERMITTING PROCESS.**—Not later than 180 days after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Secretary, in consultation with the Councils, shall promulgate regulations that create an expedited, uniform, and regionally-based process to promote issuance, where practicable, of experimental fishing permits.
- (e) **GUIDELINES.**—The Secretary, in consultation with the Councils, shall establish guidelines to ensure that participation in a research project funded under this section does not result in loss of a participant’s catch history or unexpended days-at-sea as part of a limited entry system.
- (f) **EXEMPTED PROJECTS.**—The procedures of this section shall not apply to research funded by quota set-asides in a fishery.

SEC. 319. HERRING STUDY

16 U.S.C. 1868

- (a) **IN GENERAL.**—The Secretary may conduct a cooperative research program to study the issues of abun-

127 HR 4742 page 30 lines 17+ . New since discussion draft.

128 HR 4247 page 31 lines 12+. New since discussion draft.

dance, distribution and the role of herring as forage fish for other commercially important fish stocks in the Northwest Atlantic, and the potential for local scale depletion from herring harvesting and how it relates to other fisheries in the Northwest Atlantic. In planning, designing, and implementing this program, the Secretary shall engage multiple fisheries sectors and stakeholder groups concerned with herring management.

- (b) **REPORT.**—The Secretary shall present the final results of this study to Congress within 3 months following the completion of the study, and an interim report at the end of fiscal year 2008.
- (c) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated \$2,000,000 for fiscal year 2007 through fiscal year 2009 to conduct this study.

SEC. 320. RESTORATION STUDY

16 U.S.C. 1869

- (a) **IN GENERAL.**—The Secretary may conduct a study to update scientific information and protocols needed to improve restoration techniques for a variety of coast habitat types and synthesize the results in a format easily understandable by restoration practitioners and local communities.
- (b) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated \$500,000 for fiscal year 2007 to conduct this study.

TITLE IV—FISHERY MONITORING AND RESEARCH

SEC. 401. REGISTRATION AND INFORMATION MANAGEMENT

16 U.S.C. 1881

- (a) **STANDARDIZED FISHING VESSEL REGISTRATION AND INFORMATION MANAGEMENT SYSTEM.**—The Secretary shall, in cooperation with the Secretary of the department in which the Coast Guard is operating, the States, the Councils, and Marine Fisheries Commissions, develop recommendations for implementation of a standardized fishing vessel registration and information management system on a regional basis. The recommendations shall be developed after consultation with interested governmental and nongovernmental parties and shall—
- (1) be designed to standardize the requirements of vessel registration and information collection systems required by this Act, the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.), and any other marine resource law implemented by the Secretary, and, with the permission of a State, any marine resource law implemented by such State;
 - (2) integrate information collection programs under existing fishery management plans into a non-duplicative information collection and management system;
 - (3) avoid duplication of existing State, tribal, or Federal systems and shall utilize, to the maximum extent practicable, information collected from existing systems;
 - (4) provide for implementation of the system through cooperative agreements with appropriate State, regional, or tribal entities and Marine Fisheries Commissions;
 - (5) provide for funding (subject to appropriations) to assist appropriate State, regional, or tribal entities and Marine Fisheries Commissions in implementation;
 - (6) establish standardized units of measurement, nomenclature, and formats for the collection and submission of information;
 - (7) minimize the paperwork required for vessels registered under the system;
 - (8) include all species of fish within the geographic areas of authority of the Councils and all fishing vessels including charter fishing vessels, but excluding recreational fishing vessels;
 - (9) require United States fish processors, and fish dealers and other first ex-vessel purchasers of fish that are subject to the proposed system, to submit information (other than economic information) which may be necessary to meet the goals of the proposed system; and
 - (10) include procedures necessary to ensure—
 - (A) the confidentiality of information collected under this section in accordance with section 402(b); and
 - (B) the timely release or availability to the public of information collected under this section consistent with section 402(b).
- (b) **FISHING VESSEL REGISTRATION.**—The proposed registration system should, at a minimum, obtain the following information for each fishing vessel—
- (1) the name and official number or other identification, together with the name and address of the owner or operator or both;
 - (2) gross tonnage, vessel capacity, type and quantity of fishing gear, mode of operation (catcher, catcher processor, or other), and such other pertinent information with respect to vessel characteristics as the

Secretary may require; and

- (3) identification (by species, gear type, geographic area of operations, and season) of the fisheries in which the fishing vessel participates.

(c) FISHERY INFORMATION.—The proposed information management system should, at a minimum, provide basic fisheries performance information for each fishery, including—

- (1) the number of vessels participating in the fishery including charter fishing vessels;
- (2) the time period in which the fishery occurs;
- (3) the approximate geographic location or official reporting area where the fishery occurs;
- (4) a description of fishing gear used in the fishery, including the amount and type of such gear and the appropriate unit of fishing effort; and
- (5) other information required under subsection 303(a)(5) or requested by the Council under section 402.

(d) USE OF REGISTRATION.—Any registration recommended under this section shall not be considered a permit for the purposes of this Act, and the Secretary may not propose to revoke, suspend, deny, or impose any other conditions or restrictions on any such registration or the use of such registration under this Act.

(e) PUBLIC COMMENT.—Within one year after the date of enactment of the Sustainable Fisheries Act, the Secretary shall publish in the Federal Register for a 60-day public comment period a proposal that would provide for implementation of a standardized fishing vessel registration and information collection system that meets the requirements of subsections (a) through (c). The proposal shall include—

- (1) a description of the arrangements of the Secretary for consultation and cooperation with the department in which the Coast Guard is operating, the States, the Councils, Marine Fisheries Commissions, the fishing industry and other interested parties; and
- (2) any proposed regulations or legislation necessary to implement the proposal.

(f) CONGRESSIONAL TRANSMITTAL.—Within 60 days after the end of the comment period and after consideration of comments received under subsection (e), the Secretary shall transmit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Resources of the House of Representatives a recommended proposal for implementation of a national fishing vessel registration system that includes—

- (1) any modifications made after comment and consultation;
- (2) a proposed implementation schedule, including a schedule for the proposed cooperative agreements required under subsection (a)(4); and
- (3) recommendations for any such additional legislation as the Secretary considers necessary or desirable to implement the proposed system.

(g) RECREATIONAL FISHERIES.—

- (1) **FEDERAL PROGRAM.—**The Secretary shall establish and implement a regionally based registry program for recreational fishermen in each of the 8 fishery management regions. The program, which shall not require a fee before January 1, 2011, shall provide for—
 - (A) the registration (including identification and contact information) of individuals who engage in recreational fishing—
 - (i) in the Exclusive Economic Zone;
 - (ii) for anadromous species; or
 - (iii) for Continental Shelf fishery resources beyond the Exclusive Economic Zone; and
 - (B) if appropriate, the registration (including the ownership, operator, and identification of the ves-

sel) of vessels used in such fishing.

- (2) STATE PROGRAMS.—The Secretary shall exempt from registration under the program recreational fishermen and charter fishing vessels licensed, permitted, or registered under the laws of a State if the Secretary determines that information from the State program is suitable for the Secretary's use or is used to assist in completing marine recreational fisheries statistical surveys, or evaluating the effects of proposed conservation and management measures for marine recreational fisheries.
- (3) DATA COLLECTION.—
 - (A) IMPROVEMENT OF THE MARINE RECREATIONAL FISHERY STATISTICS SURVEY.—Within 24 months after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Secretary, in consultation with representatives of the recreational fishing industry and experts in statistics, technology, and other appropriate fields, shall establish a program to improve the quality and accuracy of information generated by the Marine Recreational Fishery Statistics Survey, with a goal of achieving acceptable accuracy and utility for each individual fishery.
 - (B) NRC REPORT RECOMMENDATIONS.—The program shall take into consideration and, to the extent feasible, implement the recommendations of the National Research Council in its report Review of Recreational Fisheries Survey Methods (2006), including—
 - (i) redesigning the Survey to improve the effectiveness and appropriateness of sampling and estimation procedures, its applicability to various kinds of management decisions, and its usefulness for social and economic analyses; and
 - (ii) providing for ongoing technical evaluation and modification as needed to meet emerging management needs.
 - (C) METHODOLOGY.—Unless the Secretary determines that alternate methods will achieve this goal more efficiently and effectively, the program shall, to the extent possible, include—
 - (i) an adequate number of intercepts to accurately estimate recreational catch and effort;
 - (ii) use of surveys that target anglers registered or licensed at the State or Federal level to collect participation and effort data;
 - (iii) collection and analysis of vessel trip report data from charter fishing vessels;
 - (iv) development of a weather corrective factor that can be applied to recreational catch and effort estimates; and
 - (v) an independent committee composed of recreational fishermen, academics, persons with expertise in stock assessments and survey design, and appropriate personnel from the National Marine Fisheries Service to review the collection estimates, geographic, and other variables related to dockside intercepts and to identify deficiencies in recreational data collection, and possible correction measures.
 - (D) DEADLINE.—The Secretary shall complete the program under this paragraph and implement the improved Marine Recreational Fishery Statistics Survey not later than January 1, 2009.

(4) FEDERAL-STATE PARTNERSHIPS.—

- (A) ESTABLISHMENT.—The Secretary shall establish partnerships with States to develop best practices for implementation of State programs established pursuant to paragraph (2).
- (B) GUIDANCE.—The Secretary shall develop guidance, in cooperation with the States, that details best practices for administering State programs pursuant to paragraph (2), and provide such guidance to the States.
- (C) BIENNIAL REPORT.—The Secretary shall submit to the Congress and publish biennial reports that include—

- (i) the estimated accuracy of the registry program established under paragraph (1) and of State programs that are exempted under paragraph (2);
 - (ii) priorities for improving recreational fishing data collection; and
 - (iii) an explanation of any use of information collected by such State programs and by the Secretary, including a description of any consideration given to the information by the Secretary.
- (D) STATES GRANT PROGRAM.—The Secretary shall make grants to States to improve implementation of State programs consistent with this subsection. The Secretary shall prioritize such grants based on the ability of the grant to improve the quality and accuracy of such programs.¹²⁹
- (4)(5) REPORT.—Within 24 months after establishment of the program, the Secretary shall submit a report to Congress that describes the progress made toward achieving the goals and objectives of the program.

(6) STUDY ON PROGRAM IMPLEMENTATION.—

- (A) IN GENERAL.—Not later than 60 days after the enactment of this paragraph, the Secretary shall enter into an agreement with the National Research Council of the National Academy of Sciences to study the implementation of the programs described in this section. The study shall—
- (i) provide an updated assessment of recreational survey methods established or improved since the publication of the Council's report 'Review of Recreational Fisheries Survey Methods (2006)';
 - (ii) evaluate the extent to which the recommendations made in that report were implemented pursuant to paragraph (3)(B); and
 - (iii) examine any limitations of the Marine Recreational Fishery Statistics Survey and the Marine Recreational Information Program established under paragraph (1).
- (B) REPORT.—Not later than 1 year after entering into an agreement under subparagraph (A), the Secretary shall submit a report to Congress on the results of the study under subparagraph (A).¹³⁰

SEC. 402. INFORMATION COLLECTION

16 U.S.C. 1881a

(a) COLLECTION PROGRAMS.—

- (1) COUNCIL REQUESTS.—If a Council determines that additional information would be beneficial for developing, implementing, or revising a fishery management plan or for determining whether a fishery is in need of management, the Council may request that the Secretary implement an information collection program for the fishery which would provide the types of information specified by the Council. The Secretary shall undertake such an information collection program if he determines that the need is justified, and shall promulgate regulations to implement the program within 60 days after such determination is made. If the Secretary determines that the need for an information collection program is not justified, the Secretary shall inform the Council of the reasons for such determination in writing. The determinations of the Secretary under this paragraph regarding a Council request shall be made within a reasonable period of time after receipt of that request.
- (2) SECRETARIAL INITIATION.—If the Secretary determines that additional information is necessary for developing, implementing, revising, or monitoring a fishery management plan, or for determining whether a fishery is in need of management, the Secretary may, by regulation, implement an infor-

129 *Amendment made by Rep. Pallone of New Jersey during Committee markup on 5/29/14*

130 *Same as footnote above*

mation collection or observer program requiring submission of such additional information for the fishery.

(b) CONFIDENTIALITY OF INFORMATION.—

- (1) Any information submitted to the Secretary, a State fishery management agency, or a marine fisheries commission by any person in compliance with the requirements of this Act shall be confidential and shall not be disclosed except—
 - (A) to Federal employees and Council employees who are responsible for fishery management plan development, monitoring, or enforcement;
 - (B) to State or Marine Fisheries Commission employees as necessary **for achievement of the purposes of this Act, to further the Department's mission,** subject to a confidentiality agreement **between the State or Commission, respectively, and the Secretary** that prohibits public disclosure of the identity of **business of** any person **and of confidential information**¹³¹;
 - (C) to State employees who are responsible for fishery management plan enforcement, if the States employing those employees have entered into a fishery enforcement agreement with the Secretary and the agreement is in effect;
 - (D) when required by court order;
 - (E) when such information is used by State, Council, or Marine Fisheries Commission employees to verify catch under a **catchshare limited access** program, but only to the extent that such use is consistent with subparagraph (B);
 - (F) when the Secretary has obtained written authorization from the person submitting such information to release such information to persons for reasons not otherwise provided for in this subsection, and such release does not violate other requirements of this Act;
 - (G) when such information is required to be submitted to the Secretary for any determination under a **limited access catch share** program; or
 - (H) in support of homeland and national security activities, including the Coast Guard's homeland security missions as defined in section 888(a)(2) of the Homeland Security Act of 2002 (6 U.S.C. 468(a)(2)).
- (2) Any observer information, **and information obtained through a vessel monitoring system or other technology used onboard a fishing vessel for enforcement or data collection purposes**¹³², shall be confidential and shall not be disclosed, except in accordance with the requirements of subparagraphs (A) through (H) of paragraph (1), or—
 - (A) as authorized by a fishery management plan or regulations under the authority of the North Pacific Council to allow disclosure to the public of weekly summary bycatch information identified by vessel or for haul-specific bycatch information without vessel identification;
 - (B) when such information is necessary in proceedings to adjudicate observer certifications; **or**
 - ~~(C) as authorized by any regulations issued under paragraph (3) allowing the collection of observer information, pursuant to a confidentiality agreement between the observers, observer employers, and the Secretary prohibiting disclosure of the information by the observers or observer employers, in order—~~
 - ~~(i) to allow the sharing of observer information among observers and between observers and observer employers as necessary to train and prepare observers for deployments on specific vessels; or~~

131 HR 4742 page 24 lines 6-18. In the discussion draft all of section (1) was deleted.

132 HR 4742 page 25 lines 1-6

- (ii) ~~to validate the accuracy of the observer information collected.~~
 - (C) as authorized by any regulations issued under paragraph (6) allowing the collection of observer information, pursuant to a confidentiality agreement between the observers, observer employers, and the Secretary prohibiting disclosure of the information by the observers or observer employers, in order—
 - (i) to allow the sharing of observer information among observers and between observers and observer employers as necessary to train and prepare observers for deployments on specific vessels; or
 - (ii) to validate the accuracy of the observer information collected; or
 - (D) to other persons if the Secretary has obtained written authorization from the person who submitted such information or from the person on whose vessel the information was collected, to release such information for reasons not otherwise provided for in this subsection.¹³³
- (3) Any information submitted to the Secretary, a State fisheries management agency, or a Marine Fisheries Commission by any person in compliance with the requirements of this Act, including confidential information, may only be used for purposes of fisheries management and monitoring and enforcement under this Act.
 - (4) The Secretary may enter into a memorandum of understanding with the heads of other Federal agencies for the sharing of confidential information to ensure safety of life at sea or for fisheries enforcement purposes, including information obtained through a vessel monitoring system or other electronic enforcement and monitoring systems, if--
 - (A) the Secretary determines there is a compelling need to do so; and
 - (B) the heads of the other Federal agencies agree--
 - (i) to maintain the confidentiality of the information in accordance with the requirements that apply to the Secretary under this section; and
 - (ii) to use the information only for the purposes for which it was shared with the agencies.
 - (5) The Secretary may not provide any vessel-specific or aggregate vessel information from a fishery that is collected for monitoring and enforcement purposes to any person for the purposes of coastal and marine spatial planning under Executive Order 13547, unless the Secretary determines that providing such information is important for maintaining or enhancing national security or for ensuring fishermen continued access to fishing grounds.^{134 135}
 - (3) (6) The Secretary shall, by regulation, prescribe such procedures as may be necessary to preserve the confidentiality of information submitted in compliance with any requirement or regulation under this Act, except that the Secretary may release or make public any such information in any aggregate or summary form which does not directly or indirectly disclose the identity or business of any person who

133 HR 4742 page 26 lines 1-6 ((D) is new addition since discussion draft)

134 HR 4742 pages 24 line 6 to page 27. Changed from discussion draft version. The Council recommends no reduction in requirements for data aggregation, or distribution of bycatch information, which is important to the Council decision-making process. The Council recommends improving access to currently confidential harvest or processing information for purposes of enhanced socioeconomic analysis. In addition, the Council is concerned that the prohibition on use of data for marine spatial planning could have unintended consequences in the management arena. (3/26). Begich does not make changes to use of information.

135 Underlined text is an amendment made by Rep. Bordallo of Guam during Committee markup on 5/29/14.

submits such information. Nothing in this subsection shall be interpreted or construed to prevent the use for conservation and management purposes by the Secretary, or with the approval of the Secretary, the Council, of any information submitted in compliance with any requirement or regulation under this Act or the use, release, or publication of bycatch information pursuant to paragraph (2)(A).

(c) RESTRICTION ON USE OF CERTAIN INFORMATION.—

- (1) The Secretary shall promulgate regulations to restrict the use, in civil enforcement or criminal proceedings under this Act, the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.), and the Endangered Species Act (16 U.S.C. 1531 et seq.), of information collected by voluntary fishery data collectors, including sea samplers, while aboard any vessel for conservation and management purposes if the presence of such a fishery data collector aboard is not required by any of such Acts or regulations thereunder.
- (2) The Secretary may not require the submission of a Federal or State income tax return or statement as a prerequisite for issuance of a permit until such time as the Secretary has promulgated regulations to ensure the confidentiality of information contained in such return or statement, to limit the information submitted to that necessary to achieve a demonstrated conservation and management purpose, and to provide appropriate penalties for violation of such regulations.

(d) CONTRACTING AUTHORITY.—Notwithstanding any other provision of law, the Secretary may provide a grant, contract, or other financial assistance on a sole-source basis to a State, tribal government, Council, or Marine Fisheries Commission for the purpose of carrying out information collection or other programs if—

- (1) the recipient of such a grant, contract, or other financial assistance is specified by statute to be, or has customarily been, such State, tribal government, Council, or Marine Fisheries Commission; or
- (2) the Secretary has entered into a cooperative agreement with such State, tribal government, Council, or Marine Fisheries Commission¹³⁶.

(e) RESOURCE ASSESSMENTS.—

- (1) The Secretary may use the private sector to provide vessels, equipment, and services necessary to survey the fishery resources of the United States when the arrangement will yield statistically reliable results.
- (2) The Secretary, in consultation with the appropriate Council and the fishing industry--
 - (A) may structure competitive solicitations under paragraph (1) so as to compensate a contractor for a fishery resources survey by allowing the contractor to retain for sale fish harvested during the survey voyage;
 - (B) in the case of a survey during which the quantity or quality of fish harvested is not expected to be adequately compensatory, may structure those solicitations so as to provide that compensation by permitting the contractor to harvest on a subsequent voyage and retain for sale a portion of the allowable catch of the surveyed fishery; and
 - (C) may permit fish harvested during such survey to count toward a vessel's catch history under a fishery management plan if such survey was conducted in a manner that precluded a vessel's participation in a fishery that counted under the plan for purposes of determining catch history.
- (3) The Secretary shall undertake efforts to expand annual fishery resource assessments in all regions of the Nation.

136 This section allows Commerce and NOAA to fund fishery disasters without the need for a 25% non-Federal matching requirement. The change allows tribes to be grantees or contractors.

SEC. 403. OBSERVERS - 16 U.S.C. 1881b

- (a) **GUIDELINES FOR CARRYING OBSERVERS.**—Within one year after the date of enactment of the Sustainable Fisheries Act, the Secretary shall promulgate regulations, after notice and opportunity for public comment, for fishing vessels that carry observers. The regulations shall include guidelines for determining—
- (1) when a vessel is not required to carry an observer on board because the facilities of such vessel for the quartering of an observer, or for carrying out observer functions, are so inadequate or unsafe that the health or safety of the observer or the safe operation of the vessel would be jeopardized; and
 - (2) actions which vessel owners or operators may reasonably be required to take to render such facilities adequate and safe.
- (b) **TRAINING.**—The Secretary, in cooperation with the appropriate States and the National Sea Grant College Program, shall—
- (1) establish programs to ensure that each observer receives adequate training in collecting and analyzing the information necessary for the conservation and management purposes of the fishery to which such observer is assigned;
 - (2) require that an observer demonstrate competence in fisheries science and statistical analysis at a level sufficient to enable such person to fulfill the responsibilities of the position;
 - (3) ensure that an observer has received adequate training in basic vessel safety; and
 - (4) make use of university and any appropriate private nonprofit organization training facilities and resources, where possible, in carrying out this subsection.
- (c) **OBSERVER STATUS.**—An observer on a vessel and under contract to carry out responsibilities under this Act or the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.) shall be deemed to be a Federal employee for the purpose of compensation under the Federal Employee Compensation Act (5 U.S.C. 8101 et seq.).

SEC. 404 FISHERIES RESEARCH

16 U.S.C. 1881c

- (a) **IN GENERAL.**—The Secretary shall initiate and maintain, in cooperation with the Councils, a comprehensive program of fishery research to carry out and further the purposes, policy, and provisions of this Act. Such program shall be designed to acquire knowledge and information, including statistics, on fishery conservation and management and on the economics and social characteristics of the fisheries.
- (b) **STRATEGIC PLAN.**—Within one year after the date of enactment of the Sustainable Fisheries Act, and at least every 3 years thereafter, the Secretary shall develop and publish in the Federal Register a strategic plan for fisheries research for the 5 years immediately following such publication. The plan shall—
- (1) identify and describe a comprehensive program with a limited number of priority objectives for research in each of the areas specified in subsection (c);
 - (2) indicate goals and timetables for the program described in paragraph (1);
 - (3) provide a role for commercial fishermen in such research, including involvement in field testing;
 - (4) provide for collection and dissemination, in a timely manner, of complete and accurate information concerning fishing activities, catch, effort, stock assessments, and other research conducted under this section; and
 - (5) be developed in cooperation with the Councils and affected States, [and tribal governments](#), and provide for coordination with the Councils, affected States, [tribal governments](#), and other research entities.

(c) AREAS OF RESEARCH.—Areas of research are as follows:

- (1) Research to support fishery conservation and management, including but not limited to, biological research concerning the abundance and life history parameters of stocks of fish, the interdependence of fisheries or stocks of fish, the identification of essential fish habitat, the impact of pollution on fish populations, the impact of wetland and estuarine degradation, and other factors affecting the abundance and availability of fish.
- (2) Conservation engineering research, including the study of fish behavior and the development and testing of new gear technology and fishing techniques to minimize bycatch and any adverse effects on essential fish habitat and promote efficient harvest of target species.
- (3) Research on the fisheries, including the social, cultural, and economic relationships among fishing vessel owners, crew, United States fish processors, associated shoreside labor, seafood markets and fishing communities.
- (4) Information management research, including the development of a fishery information base and an information management system that will permit the full use of information in the support of effective fishery conservation and management.

(d) PUBLIC NOTICE.—In developing the plan required under subsection (a), the Secretary shall consult with relevant Federal, State, and international agencies, scientific and technical experts, and other interested persons, public and private, and shall publish a proposed plan in the Federal Register for the purpose of receiving public comment on the plan. The Secretary shall ensure that affected commercial fishermen are actively involved in the development of the portion of the plan pertaining to conservation engineering research. Upon final publication in the Federal Register, the plan shall be submitted by the Secretary to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Resources of the House of Representatives.

(e) USE OF THE ASSET FORFEITURE FUND FOR FISHERY INDEPENDENT DATA COLLECTION.—

- (1) **IN GENERAL.—**
 - (A) The Secretary, subject to appropriations, may obligate for data collection purposes in accordance with prioritizations under paragraph (3) a portion of amounts received by the United States as fisheries enforcement penalties.
 - (B) Amounts may be obligated under this paragraph only in the fishery management region with respect to which they are collected.
- (2) **INCLUDED PURPOSES.—**The purposes referred to in paragraph (1) include—
 - (A) the use of State personnel and resources, including fishery survey vessels owned and maintained by States to survey or assess data-poor fisheries for which fishery management plans are in effect under this Act; and
 - (B) cooperative research activities authorized under section 318 to improve or enhance the fishery independent data used in fishery stock assessments.
- (3) **DATA-POOR FISHERIES PRIORITY LISTS.—**Each Council shall—
 - (A) identify those fisheries in its region considered to be data-poor fisheries;
 - (B) prioritize those fisheries based on the need of each fishery for up-to-date information; and
 - (C) provide those priorities to the Secretary.
- (4) **DEFINITIONS.—**In this subsection:
 - (A) The term ‘data-poor fishery’ means a fishery—
 - (i) that has not been surveyed in the preceding 5-year period;
 - (ii) for which a fishery stock assessment has not been performed within the preceding 5-year

- period; or
- (iii) for which limited information on the status of the fishery is available for management purposes.
- (B) The term ‘fisheries enforcement penalties’ means any fine or penalty imposed, or proceeds of any property seized, for a violation of this Act or of any other marine resource law enforced by the Secretary.
- (5) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Secretary for each fiscal year to carry out this subsection up to 80 percent of the fisheries enforcement penalties collected during the preceding fiscal year.¹³⁷

(e) STOCK ASSESSMENT PLAN.—

- (1) IN GENERAL.—The Secretary shall develop and publish in the Federal Register, on the same schedule as required for the strategic plan required under section 404(b) of such Act, a plan to conduct stock assessments for all stocks of fish for which a fishery management plan is in effect under this Act.
- (2) CONTENTS.—The plan shall—
 - (A) for each stock of fish for which a stock assessment has previously been conducted—
 - (i) establish a schedule for updating the stock assessment that is reasonable given the biology and characteristics of the stock; and
 - (ii) subject to the availability of appropriations, require completion of a new stock assessment, or an update of the most recent stock assessment—
 - (I) every 5 years, except a Council may delay action for not more than 3 additional 1-year periods; or
 - (II) within such other time period specified and justified by the Secretary in the plan;
 - (B) for each stock of fish for which a stock assessment has not previously been conducted—
 - (i) establish a schedule for conducting an initial stock assessment that is reasonable given the biology and characteristics of the stock; and
 - (ii) subject to the availability of appropriations, require completion of the initial stock assessment not later than 3 years after the date that the plan is published in the Federal Register unless another time period is specified and justified by the Secretary in the plan; and
 - (C) identify data and analysis, especially concerning recreational fishing, that, if available, would reduce uncertainty in and improve the accuracy of future stock assessments, including whether that data and analysis could be provided by nongovernmental sources, including fishermen, fishing communities, universities, and research institutions.
- (3) WAIVER OF STOCK ASSESSMENT REQUIREMENT.—Notwithstanding subparagraphs (A)(ii) and (B)(ii) of paragraph (2), a stock assessment shall not be required for a stock of fish in the plan if the Secretary determines that such a stock assessment is not necessary and justifies the determination in the Federal Register notice required by this subsection.¹³⁸

¹³⁷ HR 4742 pages 28-30. Not substantially different from discussion draft. The Council generally supports this provision, provided that it does not redirect funds away from NMFS priorities. (3/26)

¹³⁸ Begich page 62. Council staff have identified the following issues with this wording: 1) It is not practical to do an assessment of all stocks managed in an FMP. Some stocks simply do not have enough data to inform an assessment. Instead, there should be a vetting process by the science centers and SSC to evaluate the availability of data to do an assessment. 2) It is inefficient to prescribe a frequency for conducting assessments for each stock. For example, long-lived, slow growing, low productivity stocks with very

- (4) **DEADLINE.**—Notwithstanding paragraph (1) of section 404(e) of the Magnuson-Stevens Fishery Conservation and Management Act, as amended by this section, the Secretary of Commerce shall issue the first stock assessment plan under that section by not later than 1 year after the date of enactment of this Act.¹³⁹

(f) IMPROVING DATA COLLECTION AND ANALYSIS--

- (1) **IN GENERAL.**—The Secretary, in consultation with the science and statistical committee of the Councils established under section 302(g), shall develop and publish in the Federal Register guidelines that will facilitate greater incorporation of data, analysis, and stock assessments from nongovernmental sources, including fishermen, fishing communities, universities, and research institutions, into fisheries management decisions.
- (2) **CONTENT.**—The guidelines shall—
- (A) identify types of data and analysis, especially concerning recreational fishing, that can be reliably used as the best scientific information available for purposes of this Act and the basis for establishing conservation and management measures as required by section 303(a)(1), including setting standards for the collection and use of that data and analysis in stock assessments and for other purposes;
 - (B) provide specific guidance for collecting data and performing analyses identified as necessary to reduce the uncertainty referred to in section 404(e)(2)(C); and
 - (C) establish a registry of persons providing such information.
- (3) **ACCEPTANCE AND USE OF DATA AND ANALYSES.**—The Secretary and Regional Fishery Management Councils shall—
- (A) use all data and analyses that meet the guidelines published under paragraph (1) as the best scientific information available for purposes of this Act in fisheries management decisions, unless otherwise determined by the science and statistical committee of the Councils established under section 302(g) of this Act;
 - (B) explain in the Federal Register notice announcing the fishery management decision how the data and analyses under subparagraph (A) have been used to establish conservation and management measures; and
 - (C) if any data or analysis under subparagraph (A) is not used, provide in the Federal Register notice announcing the fishery management decision an explanation developed by such science and statistical committee of why that data or analysis was not used.

- (c) DEADLINE.**—The Secretary of Commerce shall develop and publish guidelines under the amendment made by subsection (a) not later than 1 year after the date of enactment of this Act.¹⁴⁰

slow responses to environmental conditions or management actions could be assessed less frequently than fast growing, high productivity “flashy” stocks with shorter mean generation times. With 90+ species managed in the Groundfish FMP, we do not have the capacity to meet this mandate. The SSC and science centers should advise on the frequency of assessments. 3) Notwithstanding the previous comment, a 5-yr frequency requirement for assessments is out of synch with our process where assessments are done every other year. 4) The top-down mandate on the process of determining a stock assessment plan is overly burdensome. Each Council/Region should establish a plan that works for them. 5) The deadline for establishing a stock assessment plan is troublesome. This added process is likely to conflict with other higher priority items.

139 Begich page 62 line 7 - 64.

140 Begich page 65 line 16 - 67 line 20. Increases use of cooperative research.

SEC. 405. INCIDENTAL HARVEST RESEARCH

16 U.S.C. 1881d

- (a) **COLLECTION OF INFORMATION.**—Within nine months after the date of enactment of the Sustainable Fisheries Act, the Secretary shall, after consultation with the Gulf Council and South Atlantic Council, conclude the collection of information in the program to assess the impact on fishery resources of incidental harvest by the shrimp trawl fishery within the authority of such Councils. Within the same time period, the Secretary shall make available to the public aggregated summaries of information collected prior to June 30, 1994 under such program.
- (b) **IDENTIFICATION OF STOCK.**—The program concluded pursuant to subsection (a) shall provide for the identification of stocks of fish which are subject to significant incidental harvest in the course of normal shrimp trawl fishing activity.
- (c) **COLLECTION AND ASSESSMENT OF SPECIFIC STOCK INFORMATION.**—For stocks of fish identified pursuant to subsection (b), with priority given to stocks which (based upon the best available scientific information) are considered to be ~~overfished~~ depleted, the Secretary shall conduct—
- (1) a program to collect and evaluate information on the nature and extent (including the spatial and temporal distribution) of incidental mortality of such stocks as a direct result of shrimp trawl fishing activities;
 - (2) an assessment of the status and condition of such stocks, including collection of information which would allow the estimation of life history parameters with sufficient accuracy and precision to support sound scientific evaluation of the effects of various management alternatives on the status of such stocks; and
 - (3) a program of information collection and evaluation for such stocks on the magnitude and distribution of fishing mortality and fishing effort by sources of fishing mortality other than shrimp trawl fishing activity.
- (d) **BYCATCH REDUCTION PROGRAM.**—Not later than 12 months after the enactment of the Sustainable Fisheries Act, the Secretary shall, in cooperation with affected interests, and based upon the best scientific information available, complete a program to—
- (1) develop technological devices and other changes in fishing operations necessary and appropriate to minimize the incidental mortality of bycatch in the course of shrimp trawl activity to the extent practicable, taking into account the level of bycatch mortality in the fishery on November 28, 1990;
 - (2) evaluate the ecological impacts and the benefits and costs of such devices and changes in fishing operations; and
 - (3) assess whether it is practicable to utilize bycatch which is not avoidable.
- (e) **REPORT TO CONGRESS.**—The Secretary shall, within one year of completing the programs required by this section, submit a detailed report on the results of such programs to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Resources of the House of Representatives.
- (f) **IMPLEMENTATION CRITERIA.**—To the extent practicable, any conservation and management measure implemented under this Act to reduce the incidental mortality of bycatch in the course of shrimp trawl fishing shall be consistent with—
- (1) measures applicable to fishing throughout the range in United States waters of the bycatch species concerned; and
 - (2) the need to avoid any serious adverse environmental impacts on such bycatch species or the ecology of the affected area.

SEC. 406 FISHERIES SYSTEMS RESEARCH

16 U.S.C. 1882

- (a) **ESTABLISHMENT OF PANEL.**—Not later than 180 days after the date of enactment of the Sustainable Fisheries Act, the Secretary shall establish an advisory panel under this Act to develop recommendations to expand the application of ecosystem principles in fishery conservation and management activities.
- (b) **PANEL MEMBERSHIP.**—The advisory panel shall consist of not more than 20 individuals and include—

 - (1) individuals with expertise in the structures, functions, and physical and biological characteristics of ecosystems; and
 - (2) representatives from the Councils, States, fishing industry, conservation organizations, or others with expertise in the management of marine resources.
- (c) **RECOMMENDATIONS.**—Prior to selecting advisory panel members, the Secretary shall, with respect to panel members described in subsection (b)(1), solicit recommendations from the National Academy of Sciences.
- (d) **REPORT.**—Within 2 years after the date of enactment of this Act, the Secretary shall submit to the Congress a completed report of the panel established under this section, which shall include—

 - (1) an analysis of the extent to which ecosystem principles are being applied in fishery conservation and management activities, including research activities;
 - (2) proposed actions by the Secretary and by the Congress that should be undertaken to expand the application of ecosystem principles in fishery conservation and management; and
 - (3) such other information as may be appropriate.
- (e) **PROCEDURAL MATTER.**—The advisory panel established under this section shall be deemed an advisory panel under section 302(g).
- (f) **REGIONAL ECOSYSTEM RESEARCH.**—

 - (1) **STUDY.**—Within 180 days after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Secretary, in consultation with the Councils, shall undertake and complete a study on the state of the science for advancing the concepts and integration of ecosystem considerations in regional fishery management. The study should build upon the recommendations of the advisory panel and include—
 - (A) recommendations for scientific data, information and technology requirements for understanding ecosystem processes, and methods for integrating such information from a variety of federal, state, and regional sources;
 - (B) recommendations for processes for incorporating broad stake holder participation;
 - (C) recommendations for processes to account for effects of environmental variation on fish stocks and fisheries; and
 - (D) a description of existing and developing council efforts to implement ecosystem approaches, including lessons learned by the councils.
 - (2) **AGENCY TECHNICAL ADVICE AND ASSISTANCE, REGIONAL PILOT PROGRAMS.**—The Secretary is authorized to provide necessary technical advice and assistance, including grants, to the Councils for the development and design of regional pilot programs that build upon the recommendations of the advisory panel and, when completed, the study.

~~SEC. 407 GULF OF MEXICO RED SNAPPER RESEARCH—16 U.S.C. 1883~~

~~(a) INDEPENDENT PEER REVIEW.—~~

- ~~(1) Within 30 days of the date of enactment of the Sustainable Fisheries Act, the Secretary shall initiate an independent peer review to evaluate—
 - ~~(A) the accuracy and adequacy of fishery statistics used by the Secretary for the red snapper fishery in the Gulf of Mexico to account for all commercial, recreational, and charter fishing harvests and fishing effort on the stock;~~
 - ~~(B) the appropriateness of the scientific methods, information, and models used by the Secretary to assess the status and trends of the Gulf of Mexico red snapper stock and as the basis for the fishery management plan for the Gulf of Mexico red snapper fishery;~~
 - ~~(C) the appropriateness and adequacy of the management measures in the fishery management plan for red snapper in the Gulf of Mexico for conserving and managing the red snapper fishery under this Act; and~~
 - ~~(D) the costs and benefits of all reasonable alternatives to a limited access privilege program for the red snapper fishery in the Gulf of Mexico.~~~~
- ~~(2) The Secretary shall ensure that commercial, recreational, and charter fishermen in the red snapper fishery in the Gulf of Mexico are provided an opportunity to—
 - ~~(A) participate in the peer review under this subsection; and~~
 - ~~(B) provide information to the Secretary concerning the review of fishery statistics under this subsection without being subject to penalty under this Act or other applicable law for any past violation of a requirement to report such information to the Secretary.~~~~

~~(3) The Secretary shall submit a detailed written report on the findings of the peer review conducted under this subsection to the Gulf Council no later than one year after the date of enactment of the Sustainable Fisheries Act.~~

~~(b) PROHIBITION.—In addition to the restrictions under section 303(d)(1)(A), the Gulf Council may not, prior to October 1, 2002, undertake or continue the preparation of any fishery management plan, plan amendment or regulation under this Act for the Gulf of Mexico commercial red snapper fishery that creates an individual fishing quota program or that authorizes the consolidation of licenses, permits, or endorsements that result in different trip limits for vessels in the same class.~~

~~(c) REFERENDUM.—~~

- ~~(1) On or after October 1, 2002, the Gulf Council may prepare and submit a fishery management plan, plan amendment, or regulation for the Gulf of Mexico commercial red snapper fishery that creates a limited access privilege program or that authorizes the consolidation of licenses, permits, or endorsements that result in different trip limits for vessels in the same class, only if the preparation of such plan, amendment, or regulation is approved in a referendum conducted under paragraph (2) and only if the submission to the Secretary of such plan, amendment, or regulation is approved in a subsequent referendum conducted under paragraph (2).~~
- ~~(2) The Secretary, at the request of the Gulf Council, shall conduct referendums under this subsection. Only a person who held an annual vessel permit with a red snapper endorsement for such permit on September 1, 1996 (or any person to whom such permit with such endorsement was transferred after such date) and vessel captains who harvested red snapper in a commercial fishery using such endorsement in each red snapper fishing season occurring between January 1, 1993, and such date may vote in a referendum under this subsection. The referendum shall be decided by a majority of the votes cast. The Secretary shall develop a formula to weigh votes based on the proportional harvest under each such permit and endorsement and by~~

each such captain in the fishery between January 1, 1993, and September 1, 1996. Prior to each referendum, the Secretary, in consultation with the Council, shall—

- (A) identify and notify all such persons holding permits with red snapper endorsements and all such vessel captains; and
- (B) make available to all such persons and vessel captains information about the schedule, procedures, and eligibility requirements for the referendum and the proposed individual fishing quota program.

~~(d) CATCH LIMITS.—Any fishery management plan, plan amendment, or regulation submitted by the Gulf Council for the red snapper fishery after the date of enactment of the Sustainable Fisheries Act shall contain conservation and management measures that—~~

- ~~(1) establish separate quotas for recreational fishing (which, for the purposes of this subsection shall include charter fishing) and commercial fishing that, when reached, result in a prohibition on the retention of fish caught during recreational fishing and commercial fishing, respectively, for the remainder of the fishing year; and~~
- ~~(2) ensure that such quotas reflect allocations among such sectors and do not reflect any harvests in excess of such allocations.¹⁴¹~~

SEC. 408. SOUTH ATLANTIC RED SNAPPER COOPERATIVE RESEARCH PROGRAM.

Did not include here. See Begich page 68-73.

~~SEC. 408. 409. DEEP SEA CORAL RESEARCH AND TECHNOLOGY PROGRAM - 16 U.S.C. 1884-~~

~~(a) IN GENERAL.—The Secretary, in consultation with appropriate regional fishery management councils and in coordination with other federal agencies and educational institutions, shall, subject to the availability of appropriations, establish a program—~~

- ~~(1) to identify existing research on, and known locations of, deep sea corals and submit such information to the appropriate Councils;~~
- ~~(2) to locate and map locations of deep sea corals and submit such information to the Councils;~~
- ~~(3) to monitor activity in locations where deep sea corals are known or likely to occur, based on best scientific information available, including through underwater or remote sensing technologies and submit such information to the appropriate Councils;~~
- ~~(4) to conduct research, including cooperative research with fishing industry participants, on deep sea corals and related species, and on survey methods;~~
- ~~(5) to develop technologies or methods designed to assist fishing industry participants in reducing interactions between fishing gear and deep sea corals; and~~
- ~~(6) to prioritize program activities in areas where deep sea corals are known to occur, and in areas where scientific modeling or other methods predict deep sea corals are likely to be present.~~

~~(b) REPORTING.—Beginning 1 year after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Secretary, in consultation with the Councils, shall submit biennial reports to Congress and the public on steps taken by the Secretary to identify, monitor, and protect deep sea coral areas, including summaries of the results of mapping, research, and data collection performed under~~

141 HR 4742 page 32 lines 22-26. Does not affect PFMC

SEC. 409. STOCK ASSESSMENTS USED FOR FISHERIES MANAGED UNDER GULF OF MEXICO COUNCIL'S REEF FISH MANAGEMENT PLAN.

- (a) **IN GENERAL.**—The Gulf States Marine Fisheries Commission shall conduct all fishery stock assessments used for management purposes by the Gulf of Mexico Fishery Management Council for the fisheries managed under the Council's Reef Fish Management Plan.
- (b) **USE OF OTHER INFORMATION AND ASSETS.**—
- (1) **IN GENERAL.**—Such fishery assessments shall—
 - (A) incorporate fisheries survey information collected by university researchers; and
 - (B) to the extent practicable, use State, university, and private assets to conduct fisheries surveys
 - (2) **SURVEYS AT ARTIFICIAL REEFS.**—Any such fishery stock assessment conducted after the date of the enactment of the Strengthening Fishing Communities and Increasing Flexibility in Fisheries Management Act shall incorporate fishery surveys conducted, and other relevant fisheries information collected, on and around natural and artificial reefs.
- (c) **CONSTITUENT AND STAKEHOLDER PARTICIPATION.**—Each such fishery assessment shall—
- (1) emphasize constituent and stakeholder participation in the development of the assessment;
 - (2) contain all of the raw data used in the assessment and a description of the methods used to collect that data; and
 - (3) employ an assessment process that is transparent and includes—
 - (A) includes a rigorous and independent scientific review of the completed fishery stock assessment; and
 - (B) a panel of independent experts to review the data and assessment and make recommendations on the most appropriate values of critical population and management quantities.¹⁴³

¹⁴² Begich page 79 lines 5-9. Not sure if this section is meant to be struck.

¹⁴³ Amendment made by Rep. Byrne of Alabama at hearing on 5/29/14.

Appendix

INVESTMENT IN UNITED STATES SEAFOOD PROCESSING FACILITIES.—

The Secretary of Commerce shall work with the Small Business Administration and other Federal agencies to develop financial and other mechanisms to encourage United States investment in seafood processing facilities in the United States for fisheries that lack capacity needed to process fish harvested by United States vessels in compliance with the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.).

COMMUNITY-BASED RESTORATION PROGRAM FOR FISHERY AND COASTAL HABITATS.

- (a) **IN GENERAL.**—The Secretary of Commerce shall establish a community-based fishery and coastal habitat restoration program to implement and support the restoration of fishery and coastal habitats.
- (b) **AUTHORIZED ACTIVITIES.**—In carrying out the program, the Secretary may—
 - (1) provide funding and technical expertise to fishery and coastal communities to assist them in restoring fishery and coastal habitat;
 - (2) advance the science and monitoring of coastal habitat restoration;
 - (3) transfer restoration technologies to the private sector, the public, and other governmental agencies;
 - (4) develop public-private partnerships to accomplish sound coastal restoration projects;
 - (5) promote significant community support and volunteer participation in fishery and coastal habitat restoration;
 - (6) promote stewardship of fishery and coastal habitats; and
 - (7) leverage resources through national, regional, and local public-private partnerships.

FISHERIES CONSERVATION AND MANAGEMENT FUND.

- (a) **IN GENERAL.**—The Secretary shall establish and maintain a fund, to be known as the “Fisheries Conservation and Management Fund”, which shall consist of amounts retained and deposited into the Fund under subsection (c).
- (b) **PURPOSES.**—Subject to the allocation of funds described in subsection (d), amounts in the Fund shall be available to the Secretary of Commerce, without appropriation or fiscal year limitation, to disburse as described in subsection (e) for—
 - (1) efforts to improve fishery harvest data collection including—
 - (A) expanding the use of electronic catch reporting programs and technology; and
 - (B) improvement of monitoring and observer coverage through the expanded use of electronic monitoring devices and satellite tracking systems such as VMS on small vessels;
 - (2) cooperative fishery research and analysis, in collaboration with fishery participants, academic institutions, community residents, and other interested parties;
 - (3) development of methods or new technologies to improve the quality, health safety, and value of fish landed;
 - (4) conducting analysis of fish and seafood for health benefits and risks, including levels of contaminants and, where feasible, the source of such contaminants;
 - (5) marketing of sustainable United States fishery products, including consumer education regarding the

health or other benefits of wild fishery products harvested by vessels of the United States;

- (6) improving data collection under the Marine Recreational Fishery Statistics Survey in accordance with section 401(g)(3) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1881(g)(3)); and
- (7) providing financial assistance to fishermen to offset the costs of modifying fishing practices and gear to meet the requirements of this Act, the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.), and other Federal laws in pari materia.

(c) DEPOSITS TO THE FUND.—

- (1) **QUOTA SET-ASIDES.**—Any amount generated through quota set-asides established by a Council under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.) and designated by the Council for inclusion in the Fishery Conservation and Management Fund, may be deposited in the Fund.
- (2) **OTHER FUNDS.**—In addition to amounts received pursuant to paragraph (1) of this subsection, the Fishery Conservation and Management Fund may also receive funds from—
 - (A) appropriations for the purposes of this section; and
 - (B) States or other public sources or private or nonprofit organizations for purposes of this section.

(d) REGIONAL ALLOCATION.—The Secretary shall, every 2 years, apportion monies from the Fund among the eight Council regions according to recommendations of the Councils, based on regional priorities identified through the Council process, except that no region shall receive less than 5 percent of the Fund in each allocation period.

(e) LIMITATION ON THE USE OF THE FUND.—No amount made available from the Fund may be used to defray the costs of carrying out requirements of this Act or the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.) other than those uses identified in this section.

UNITED STATES CATCH HISTORY.

In establishing catch allocations under international fisheries agreements, the Secretary, in consultation with the Secretary of the Department in which the Coast Guard is operating, and the Secretary of State, shall ensure that all catch history associated with a vessel of the United States remains with the United States and is not transferred or credited to any other nation or vessel of such nation, including when a vessel of the United States is sold or transferred to a citizen of another nation or to an entity controlled by citizens of another nation.

SECRETARIAL REPRESENTATIVE FOR INTERNATIONAL FISHERIES.¹⁴⁴

- (a) **IN GENERAL.**—The Secretary, in consultation with the Under Secretary of Commerce for Oceans and Atmosphere, shall designate a Senate-confirmed, senior official within the National Oceanic and Atmospheric Administration to perform the duties of the Secretary with respect to international agreements involving fisheries and other living marine resources, including policy development and representation as a U.S. Commissioner, under any such international agreements.
- (b) **ADVICE.**—The designated official shall, in consultation with the Deputy Assistant Secretary for International Affairs and the Administrator of the National Marine Fisheries Service, advise the Secretary, Undersecretary of Commerce for Oceans and Atmosphere, and other senior officials of the Department of Commerce

¹⁴⁴ Begich moves this up into the MSA. This clarifies that the Secretarial Representative is a senior official appointed by the President and confirmed by the Senate; not to be delegated to a lower level officer or employee.

and the National Oceanic and Atmospheric Administration on development of policy on international fisheries conservation and management matters.

- (c) **CONSULTATION.**—The designated official shall consult with the Senate Committee on Commerce, Science, and Transportation and the House Committee on Resources on matters pertaining to any regional or international negotiation concerning living marine resources, including shellfish.
- (d) **DELEGATION.**—The designated official may delegate and authorize successive re-delegation of such functions, powers, and duties to such officers and employees of the National Oceanic and Atmospheric Administration as deemed necessary to discharge the responsibility of the Office.
- (e) **EFFECTIVE DATE.**—This section shall take effect on January 1, 2009.

REPORT (uncodified)¹⁴⁵.—

Within 15 months after the date of enactment of this Act, the National Marine Fisheries Service and the United States Coast Guard shall transmit a joint report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Resources containing—

- (1) a cost-to-benefit analysis of the feasibility, value, and cost of using vessel monitoring systems, satellite-based maritime distress and safety systems, or similar systems for fishery management, conservation, enforcement, and safety purposes with the Federal government bearing the capital costs of any such system;
- (2) an examination of the cumulative impact of existing requirements for commercial vessels;
- (3) an examination of whether satellite-based maritime distress and safety systems, or similar requirements would overlap existing requirements or render them redundant;
- (4) an examination of how data integration from such systems could be addressed;
- (5) an examination of how to maximize the data-sharing opportunities between relevant State and Federal agencies and provide specific information on how to develop these opportunities, including the provision of direct access to satellite-based maritime distress and safety system or similar system data to State enforcement officers, while considering the need to maintain or provide an appropriate level of individual vessel confidentiality where practicable; and
- (6) an assessment of how the satellite-based maritime distress and safety system or similar systems could be developed, purchased, and distributed to regulated vessels.

SALMON PLAN AND STUDY.—

- (1) **RECOVERY PLAN.**—Not later than 6 months after the date of enactment of this Act, the Secretary of Commerce shall complete a recovery plan for Klamath River Coho salmon and make it available to the public.
- (2) **ANNUAL REPORT.**—Not later than 2 years after the date of enactment of this Act, and annually thereafter, the Secretary of Commerce shall submit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Resources on—
 - (A) the actions taken under the recovery plan and other law relating to recovery of Klamath River Coho salmon, and how those actions are specifically contributing to its recovery;

¹⁴⁵ Re “uncodified”: Only “general and permanent” laws are codified; the Code does not usually include provisions that apply only to a limited number of people (a private law) or for a limited time, such as most appropriation acts or budget laws, which apply only for a single fiscal year. If these limited provisions are significant, however, they may be printed as “notes” underneath related sections of the Code.

- (B) the progress made on the restoration of salmon spawning habitat, including water conditions as they relate to salmon health and recovery, with emphasis on the Klamath River and its tributaries below Iron Gate Dam;
- (C) the status of other Klamath River anadromous fish populations, particularly Chinook salmon; and
- (D) the actions taken by the Secretary to address the calendar year 2003 National Research Council recommendations regarding monitoring and research on Klamath River Basin salmon stocks.

OREGON AND CALIFORNIA SALMON FISHERY (uncodified).—

Federally recognized Indian tribes and small businesses, including fishermen, fish processors, and related businesses serving the fishing industry, adversely affected by Federal closures and fishing restrictions in the Oregon and California 2006 fall Chinook salmon fishery are eligible to receive direct assistance under section 312(a) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1861a(a)) and section 308(d) of the Interjurisdictional Fisheries Act of 1986 (16 U.S.C. 4107(d)). The Secretary may use no more than 4 percent of any monetary assistance to pay for administrative costs.

FISHERY FINANCE PROGRAM HURRICANE ASSISTANCE (uncodified).

- (a) **LOAN ASSISTANCE.**—Subject to availability of appropriations, the Secretary of Commerce shall provide assistance to eligible holders of fishery finance program loans and allocate such assistance among eligible holders based upon their outstanding principal balances as of December 2, 2005, for any of the following purposes:
 - (1) To defer principal payments on the debt for 1 year and re-amortize the debt over the remaining term of the loan.
 - (2) To allow for an extension of the term of the loan for up to 1 year beyond the remaining term of the loan, or September 30, 2013, whichever is later.
 - (3) To pay the interest costs for such loans over fiscal years 2007 through 2013, not to exceed amounts authorized under subsection (d).
 - (4) To provide opportunities for loan forgiveness, as specified in subsection (c).
- (b) **LOAN FORGIVENESS.**—Upon application made by an eligible holder of a fishery finance program loan, made at such time, in such manner, and containing such information as the Secretary may require, the Secretary, on a calendar year basis beginning in 2005, may, with respect to uninsured losses—
 - (1) offset against the outstanding balance on the loan an amount equal to the sum of the amounts expended by the holder during the calendar year to repair or replace covered vessels or facilities, or to invest in new fisheries infrastructure within or for use within the declared fisheries disaster area; or
 - (2) cancel the amount of debt equal to 100 hundred percent of actual expenditures on eligible repairs, reinvestment, expansion, or new investment in fisheries infrastructure in the disaster region, or repairs to, or replacement of, eligible fishing vessels.
- (c) **DEFINITIONS.**—In this section:
 - (1) **DECLARED FISHERIES DISASTER AREA.**—The term “declared fisheries disaster area” means fisheries located in the major disaster area designated by the President under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.) as a result of Hurricane Katrina or Hurricane Rita.
 - (2) **ELIGIBLE HOLDER.**—The term “eligible holder” means the holder of a fishery finance program loan if—
 - (A) that loan is[sic] used to guarantee or finance any fishing vessel or fish processing facility home-

ported or located within the declared fisheries disaster area; and

- (B) the holder makes expenditures to repair or replace such covered vessels or facilities, or invests in new fisheries infrastructure within or for use within the declared fisheries disaster area, to restore such facilities following the disaster.

- (3) **FISHERY FINANCE PROGRAM LOAN.**—The term “fishery finance program loan” means a loan made or guaranteed under the fishery finance program under chapter 537 of title 46, United States Code.

- (d) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to the Secretary of Commerce for the purposes of this section not more than \$15,000,000 for each eligible holder for the period beginning with fiscal year 2007 through fiscal year 2013.

CLARIFICATION OF FLEXIBILITY (uncodified).

- (a) **IN GENERAL.**—The Secretary of Commerce has the discretion under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1851 et seq.) to extend the time for rebuilding the summer flounder fishery to not later than January 1, 2013, only if—

- (1) the Secretary has determined that—
 - (A) overfishing is not occurring in the fishery and that a mechanism is in place to ensure overfishing does not occur in the fishery; and
 - (B) stock biomass levels are increasing;
- (2) the biomass rebuilding target previously applicable to such stock will be met or exceeded within the new time for rebuilding;
- (3) the extension period is based on the status and biology of the stock and the rate of rebuilding;
- (4) monitoring will ensure rebuilding continues;
- (5) the extension meets the requirements of section 301(a)(1) of that Act (16 U.S.C. 1851(a)(1)); and
- (6) the best scientific information available shows that the extension will allow continued rebuilding.

- (b) **AUTHORITY.**—Nothing in this section shall be construed to amend the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1851 et seq.) or to limit or otherwise alter the authority of the Secretary under that Act concerning other species.

CONVERSION TO CATCHER/PROCESSOR SHARES (uncodified).

- (a) **IN GENERAL.**—

- (1) **AMENDMENT OF PLAN.**—Not later than 90 days after the date of enactment of this Act, the Secretary of Commerce shall amend the fishery management plan for the Bering Sea/Aleutian Islands King and Tanner Crabs for the Northern Region (as that term is used in the plan) to authorize—
 - (A) an eligible entity holding processor quota shares to elect on an annual basis to work together with other entities holding processor quota shares and affiliated with such eligible entity through common ownership to combine any catcher vessel quota shares for the Northern Region with their processor quota shares and to exchange them for newly created catcher/processor owner quota shares for the Northern Region; and
 - (B) an eligible entity holding catcher vessel quota shares to elect on an annual basis to work together with other entities holding catcher vessel quota shares and affiliated with such eligible entity through common ownership to combine any processor quota shares for the Northern Region with their catcher vessel quota shares and to exchange them for newly created catcher/processor owner quota shares for the Northern Region.

(2) ELIGIBILITY AND LIMITATIONS.—

(A) The authority provided in paragraph (1)(A) shall—

(i)

(I) apply only to an entity which was initially awarded both catcher/processor owner quota shares, and processor quota shares under the plan (in combination with the processor quota shares of its commonly owned affiliates) of less than 7 percent of the Bering Sea/Aleutian Island processor quota shares; or

(II) apply only to an entity which was initially awarded both catcher/processor owner quota shares under the plan and processor quota shares under section 417(a) of the Coast Guard and Maritime Transportation Act of 2006 (Public Law 109–241; 120 Stat. 546);

(ii) be limited to processor quota shares initially awarded to such entities and their commonly owned affiliates under the plan or section 417(a) of that Act; and

(iii) shall not exceed 1 million pounds per entity during any calendar year.

(B) The authority provided in paragraph (1)(B) shall—

(i) apply only to an entity which was initially awarded both catcher/processor owner quota shares, and processor quota shares under the plan (in combination with the processor quota shares of its commonly owned affiliates) of more than 7 percent of the Bering Sea/Aleutian Island processor quota shares;

(ii) be limited to catcher vessel quota shares initially awarded to such entity and its commonly owned affiliates; and

(iii) shall not exceed 1 million pounds per entity during any calendar year.

(3) EXCHANGE RATE.—The entities referred to in paragraph (1) shall receive under the amendment 1 unit of newly created catcher/processor owner quota shares in exchange for 1 unit of catcher vessel owner quota shares and 0.9 units of processor quota shares.

(4) AREA OF VALIDITY.—Each unit of newly created catcher/processor owner quota shares under this subsection shall only be valid for the Northern Region.

(b) FEES.—

(1) LOCAL FEES.—The holder of the newly created catcher/processor owner quota shares under subsection (a) shall pay a fee of 5 percent of the ex-vessel value of the crab harvested pursuant to those shares to any local governmental entities in the Northern Region if the processor quota shares used to produce those newly created catcher/processor owner quota shares were originally derived from the processing activities that occurred in a community under the jurisdiction of those local governmental entities.

(2) STATE FEE.—The State of Alaska may collect from the holder of the newly created catcher/processor owner quota shares under subsection (a) a fee of 1 percent of the ex-vessel value of the crab harvested pursuant to those shares.

(c) OFF-LOADING REQUIREMENT.—Crab harvested pursuant to catcher/processor owner quota shares created under this subsection shall be off-loaded in those communities receiving the local governmental entities fee revenue set forth in subsection (b)(1).

(d) PERIODIC COUNCIL REVIEW.—As part of its periodic review of the plan, the North Pacific Fishery Management Council may review the effect, if any, of this subsection upon communities in the Northern Region. If the Council determines that this section adversely affects the communities, the Council may recommend to the Secretary of Commerce, and the Secretary may approve, such changes to the plan as are necessary to mitigate those adverse effects.

(e) USE CAPS.—

- (1) **IN GENERAL.**—Notwithstanding sections 680.42(b)(ii)(2) and 680.7(a)(ii)(7) of title 50, Code of Federal Regulations, custom processing arrangements shall not count against any use cap for the processing of opilio crab in the Northern Region so long as such crab is processed in the Northern Region by a shore-based crab processor.
- (2) **SHORE-BASED CRAB PROCESSOR DEFINED.**—In this paragraph, the term “shore-based crab processor” means any person or vessel that receives, purchases, or arranges to purchase unprocessed crab, that is located on shore or moored within the harbor.

IMPACT OF TURTLE EXCLUDER DEVICES ON SHRIMPING (uncodified).

- (a) IN GENERAL.**—The Undersecretary of Commerce for Oceans and Atmosphere shall execute an agreement with the National Academy of Sciences to conduct, jointly, a multi-year, comprehensive in- water study designed—
- (1) to measure accurately the efforts and effects of shrimp fishery efforts to utilize turtle excluder devices;
 - (2) to analyze the impact of those efforts on sea turtle mortality, including interaction between turtles and shrimp trawlers in the inshore, nearshore, and offshore waters of the Gulf of Mexico and similar geographical locations in the waters of the Southeastern United States; and
 - (3) to evaluate innovative technologies to increase shrimp retention in turtle excluder devices while ensuring the protection of endangered and threatened sea turtles.
- (b) OBSERVERS.**—In conducting the study, the Undersecretary shall ensure that observers are placed onboard commercial shrimp fishing vessels where appropriate or necessary.
- (c) INTERIM REPORTS.**—During the course of the study and until a final report is submitted to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Resources, the National Academy of Sciences shall transmit interim reports to the Committees biannually containing a summary of preliminary findings and conclusions from the study.

HURRICANE EFFECTS ON COMMERCIAL AND RECREATION FISHERY HABITATS (uncodified).

- (a) FISHERIES REPORT.**—Within 180 days after the date of enactment of this Act, the Secretary of Commerce shall transmit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Resources on the impact of Hurricane Katrina, Hurricane Rita, and Hurricane Wilma on—
- (1) commercial and recreational fisheries in the States of Alabama, Louisiana, Florida, Mississippi, and Texas;
 - (2) shrimp fishing vessels in those States; and
 - (3) the oyster industry in those States.
- (b) HABITAT REPORT.**—Within 180 days after the date of enactment of this Act, the Secretary of Commerce shall transmit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Resources on the impact of Hurricane Katrina, Hurricane Rita, and Hurricane Wilma on habitat, including the habitat of shrimp and oysters in those States.
- (c) HABITAT RESTORATION.**—The Secretary shall carry out activities to restore fishery habitats, including the shrimp and oyster habitats in Louisiana and Mississippi.

NEW ENGLAND GROUNDFISH FISHERY (uncodified).

- (a) **REVIEW.**—The Secretary of Commerce shall conduct a unique, thorough examination of the potential impact on all affected and interested parties of Framework 42 to the Northeast Multispecies Fishery Management Plan.
- (b) **REPORT.**—The Secretary shall report the Secretary’s findings under subsection (a) within 30 days after the date of enactment of this Act. The Secretary shall include in the report a detailed discussion of each of the following:
- (1) The economic and social implications for affected parties within the fishery, including potential losses to infrastructure, expected from the imposition of Framework 42.
 - (2) The estimated average annual income generated by fishermen in New England, separated by State and vessel size, and the estimated annual income expected after the imposition of Framework 42.
 - (3) Whether the differential days-at-sea counting imposed by Framework 42 would result in a reduction in the number of small vessels actively participating in the New England Fishery.
 - (4) The percentage and approximate number of vessels in the New England fishery, separated by State and vessel type, that are incapable of fishing outside the areas designated in Framework 42 for differential days-at-sea counting.
 - (5) The percentage of the annual groundfish catch in the New England fishery that is harvested by small vessels.
 - (6) The current monetary value of groundfish permits in the New England fishery and the actual impact that the potential imposition of Framework 42 is having on such value.
 - (7) Whether permitting days-at-sea to be leased is altering the market value for groundfish permits or days-at-sea in New England.
 - (8) Whether there is a substantially high probability that the biomass targets used as a basis for Amendment 13 remain achievable.
 - (9) An identification of the year in which the biomass targets used as a basis for Amendment 13 were last evident or achieved, and the evidence used to determine such date.
 - (10) Any separate or non-fishing factors, including environmental factors, that may be leading to a slower rebuilding of groundfish than previously anticipated.
 - (11) The potential harm to the non-fishing environment and ecosystem from the reduction in fishing resulting from Framework 42 and the potential redevelopment of the coastal land for other purposes, including potential for increases in non-point source of pollution and other impacts.

REPORT ON COUNCIL MANAGEMENT COORDINATION (uncodified).

The Mid-Atlantic Fishery Council, in consultation with the New England Fishery Council, shall submit a report to the Senate Committee on Commerce, Science, and Transportation within 9 months after the date of enactment of this Act—

- (1) describing the role of council liaisons between the Mid-Atlantic and New England Councils, including an explanation of council policies regarding the liaison’s role in Council decision-making since 1996;
- (2) describing how management actions are taken regarding the operational aspects of current joint fishery management plans, and how such joint plans may undergo changes through amendment or framework processes;
- (3) evaluating the role of the New England Fishery Council and the Mid-Atlantic Fishery Council liaisons in the development and approval of management plans for fisheries in which the liaisons or members of the non-controlling Council have a demonstrated interest and significant current and historical land-

ings of species managed by either Council;

- (4) evaluating the effectiveness of the various approaches developed by the Councils to improve representation for affected members of the non-controlling Council in Council decision-making, such as use of liaisons, joint management plans, and other policies, taking into account both the procedural and conservation requirements of the Magnuson-Stevens Fishery Conservation and Management Act; and
- (5) analyzing characteristics of North Carolina and Florida that supported their inclusion as voting members of more than one Council and the extent to which those characteristics support Rhode Island's inclusion on a second Council (the Mid-Atlantic Council).

STUDY OF SHORTAGE IN THE NUMBER OF INDIVIDUALS WITH POST- BACCALAURE- ATE DEGREES IN SUBJECTS RELATED TO FISHERY SCIENCE (uncodified).

(a) IN GENERAL.—The Secretary of Commerce and the Secretary of Education shall collaborate to conduct a study of—

- (1) whether there is a shortage in the number of individuals with post-baccalaureate degrees in subjects related to fishery science, including fishery oceanography, fishery ecology, and fishery anthropology, who have the ability to conduct high quality scientific research in fishery stock assessment, fishery population dynamics, and related fields, for government, nonprofit, and private sector entities;
- (2) what Federal programs are available to help facilitate the education of students hoping to pursue these degrees; and
- (3) what institutions of higher education, the private sector, and the Congress could do to try to increase the number of individuals with such post-baccalaureate degrees.

(b) REPORT.—Not later than 8 months after the date of enactment of this Act, the Secretaries of Commerce and Education shall transmit a report to each committee of Congress with jurisdiction over the programs referred to in subsection (a), detailing the findings and recommendations of the study under this section.

PACIFIC FISHERY MANAGEMENT COUNCIL (uncodified).—

- (1) **IN GENERAL.**—The Pacific Fishery Management Council shall develop a proposal for the appropriate rationalization program for the Pacific trawl groundfish and whiting fisheries, including the shore-based sector of the Pacific whiting fishery under its jurisdiction. The proposal may include only the Pacific whiting fishery, including the shore-based sector, if the Pacific Council determines that a rationalization plan for the fishery as a whole cannot be achieved before the report is required to be submitted under paragraph (3).
- (2) **REQUIRED ANALYSIS.**—In developing the proposal to rationalize the fishery, the Pacific Council shall fully analyze alternative program designs, including the allocation of limited access privileges to harvest fish to fishermen and processors working together in regional fishery associations or some other cooperative manner to harvest and process the fish, as well as the effects of these program designs and allocations on competition and conservation. The analysis shall include an assessment of the impact of the proposal on conservation and the economics of communities, fishermen, and processors participating in the trawl groundfish fisheries, including the shore-based sector of the Pacific whiting fishery.
- (3) **REPORT.**—The Pacific Council shall submit the proposal and related analysis to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Resources no later than 24 months after the date of enactment of this Act.

STUDY OF THE ACIDIFICATION OF THE OCEANS AND EFFECT ON FISHERIES (uncodified).

The Secretary of Commerce shall request the National Research Council to conduct a study of the acidification of the oceans and how this process affects the United States.

OTHER GENERAL CHANGES

HASTINGS CHANGES

SEC. 8. DATA COLLECTION AND DATA CONFIDENTIALITY.

a) Electronic Monitoring.—

- (1) Issuance of regulations.—
 - (A) **REQUIREMENT.**—The Secretary shall issue regulations governing the use of electronic monitoring for the purposes of monitoring fisheries that are subject to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.)
 - (B) **CONTENT.**—The regulations shall—
 - (i) distinguish between monitoring for data collection and research purposes and monitoring for compliance and enforcement purposes; and
 - (ii) include minimum criteria, objectives, or performance standards for electronic monitoring.
 - (C) **PROCESS.**—In issuing the regulations the Secretary shall—
 - (i) consult with the Councils and fishery management commissions;
 - (ii) publish the proposed regulations; and
 - (iii) provide an opportunity for the submission by the public of comments on the proposed regulations.
- (2) Implementation of monitoring.—
 - (A) **IN GENERAL.**—Subject to subparagraph (B), and after the issuance of the final regulations, a Council, or the Secretary for fisheries referred to in section 302(a)(3) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1852(a)(3)), may, in accordance with the regulations, on a fishery-by-fishery basis and consistent with the existing objectives and management goals of a fishery management plan and the Act for a fishery issued by the Council or the Secretary, respectively, amend such plan—
 - (i) to incorporate electronic monitoring as an alternative tool for data collection and monitoring purposes **or for compliance and enforcement purposes** (or both); and
 - (ii) to allow for the replacement of a percentage of on-board observers with electronic monitoring.
 - (B) **COMPARABILITY.**—Subparagraph (A) shall apply to a fishery only if the Council or Secretary, respectively, determines that such monitoring will yield comparable data collection and compliance results.
- (3) Pilot projects.—

Before the issuance of final regulations, a Council, or the Secretary for fisheries referred to in section 302(a)(3), may, subject to the requirements of the Magnuson-Stevens Fishery Conservation and Management Act, on a fishery-by-fishery basis, and consistent with the existing objectives and management goals of a fishery management plan for a fishery issued by the Council or the Secretary, respectively, conduct a pilot project for the use of electronic monitoring for the fishery.

- (4) **DEADLINE.**—The Secretary shall issue final regulations under this subsection by not later than 12 months after the date of enactment of this Act.¹⁴⁶

- (b) **VIDEO AND ACOUSTIC SURVEY TECHNOLOGIES.**—The Secretary shall work with the Regional Fishery Management Councils and nongovernmental entities to develop and implement the use pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.) of video survey technologies and expanded use of acoustic survey technologies.¹⁴⁷

REPORTING AND DATA COLLECTION PROGRAM.¹⁴⁸

The Secretary of Commerce shall—

- (1) in conjunction with the States, the Gulf of Mexico Fishery Management Council, and the recreational fishing sectors, develop and implement a real-time reporting and data collection program for the Gulf of Mexico red snapper fishery using available technology; and
- (2) make implementation of this subsection a priority for funds received by the Secretary under section 2 of the Act of August 11, 1939 (commonly known as the “Saltonstall-Kennedy Act”) (15 U.S.C. 713c–3).

FISHERIES COOPERATIVE RESEARCH PROGRAM.¹⁴⁹

The Secretary of Commerce—

- (1) shall, in conjunction with the States, the Gulf States Marine Fisheries Commission and the Atlantic States Marine Fisheries Commission, the Gulf of Mexico and South Atlantic Fishery Management Councils, and the commercial, charter, and recreational fishing sectors, develop and implement a cooperative research program authorized under section 318 for the fisheries of the Gulf of Mexico and South Atlantic regions, giving priority to those fisheries that are considered data poor; and
- (2) may, subject to the availability of appropriations, use funds received by the Secretary under section 2 of the Act of August 11, 1939 (commonly known as the “Saltonstall-Kennedy Act”) (15 U.S.C. 713c–3) to implement this subsection.

STOCK SURVEYS AND STOCK ASSESSMENTS.¹⁵⁰

The Secretary of Commerce, acting through the National Marine Fisheries Service Regional Administrator of the Southeast Regional Office, shall for purposes of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.)—

- (1) develop a schedule of stock surveys and stock assessments for the Gulf of Mexico Region and the South Atlantic Region for the 5-year period beginning on the date of the enactment of this Act and for every 5-year period thereafter;
- (2) direct the Southeast Science Center Director to implement such schedule; and
- (3) in such development and implementation—
 - (A) give priority to those stocks that are commercially or recreationally important; and
 - (B) ensure that each such important stock is surveyed at least every 5 years.

146 *HR 4742 change from discussion draft. Page 21 line 8 - page 23 line 23. This version allows use of electronic monitoring for law enforcement.*

147 *The Council supports this provision, while noting the need for additional funding to make it effective. (3/14, 3/26)*

148 *HR 4742 page 33. Does not affect PFMC.*

149 *HR 4742 page 33. Does not affect PFMC.*

150 *HR 4742 page 34. Does not affect PFMC.*

USE OF FISHERIES INFORMATION IN STOCK ASSESSMENTS.¹⁵¹

The Southeast Science Center Director shall ensure that fisheries information made available through research funded under Public Law 112–141 is incorporated as soon as possible into any fisheries stock assessments conducted after the date of the enactment of this Act.

LIMITATION ON HARVEST IN NORTH PACIFIC DIRECTED POLLOCK FISHERY.¹⁵²

Section 210(e)(1) of the American Fisheries Act (title II of division C of Public Law 105-277; 16 U.S.C. 1851 note) is amended to read as follows:

(1) Harvesting.--

- (A) Limitation.--No particular individual, corporation, or other entity may harvest, through a fishery cooperative or otherwise, a percentage of the pollock available to be harvested in the directed pollock fishery that exceeds the percentage established for purposes of this paragraph by the North Pacific Council.
- (B) Maximum percentage.--The percentage established by the North Pacific Council shall not exceed 24 percent of the pollock available to be harvested in the directed Pollock fishery.

REVITALIZING THE ECONOMY OF FISHERIES IN THE PACIFIC ACT.¹⁵³

FINDINGS; PURPOSE.

(a) Findings.--Congress makes the following findings:

- (1) In 2000, the Secretary of Commerce declared the West Coast groundfish fishery a Federal fisheries economic disaster due to low stock abundance, an overcapitalized fleet, and historically overfished stocks.
- (2) Section 212 of the Department of Commerce and Related Agencies Appropriations Act, 2003 (title II of division B of Public Law 108-7; 117 Stat. 80) was enacted to establish a Pacific Coast groundfish fishing capacity reduction program, also known as a buyback program, to remove excess fishing capacity.
- (3) In 2003, Congress authorized the \$35,700,000 buyback loan, creating the Pacific Coast groundfish fishing capacity reduction program through the National Marine Fisheries Service fisheries finance program with a term of 30 years. The interest rate of the buyback loan was fixed at 6.97 percent and is paid back based on an ex-vessel fee landing rate not to exceed 5 percent for the loan.
- (4) The groundfish fishing capacity reduction program resulted in the removal of limited entry trawl Federal fishing permits from the fishery, representing approximately 46 percent of total landings at the time.
- (5) Because of an absence of a repayment mechanism, \$4,243,730 in interest accrued before fee collection procedures were established in 2005, over 18 months after the groundfish fishing capacity reduction program was initiated.
- (6) In 2011, the West Coast groundfish fishery transitioned to an individual fishing quota fishery, which is a type of catch share program.
- (7) By 2015, West Coast groundfish fishermen's expenses are expected to include fees of approximately \$450 per day for observers, a 3-percent cost recovery fee as authorized by the Magnuson-Stevens Fish-

151 HR 4742 pages 34-35 Does not affect PPMC.

152 HR 4742 page 37. New since discussion draft.

153 HR 4742 page 38+. New since discussion draft.

ery Conservation and Management Act (16 U.S.C. 1801) for catch share programs, and a 5-percent ex-vessel landings rate for the loan repayment, which could reach 18 percent of their total gross revenue.

- (8) In 2012, the West Coast groundfish limited entry trawl fishery generated \$63,000,000, an increase from an average of \$45,000,000 during the years 2006 to 2011. This revenue is expected to continue to increase post-rationalization.
- (b) Purpose.--The purpose of this title is to refinance the Pacific Coast groundfish fishery fishing capacity reduction program to protect and conserve the West Coast groundfish fishery and the coastal economies in California, Oregon, and Washington that rely on it.

REFINANCING OF PACIFIC COAST GROUNDFISH FISHING CAPACITY REDUCTION LOAN.

(a) **In General.**--The Secretary of Commerce, upon receipt of such assurances as the Secretary considers appropriate to protect the interests of the United States, shall issue a loan to refinance the existing debt obligation funding the fishing capacity reduction program for the West Coast groundfish fishery implemented under section 212 of the Department of Commerce and Related Agencies Appropriations Act, 2003 (title II of division B of Public Law 108-7; 117 Stat. 80).

(b) **Applicable Law.**--Except as otherwise provided in this section, the Secretary shall issue the loan under this section in accordance with subsections (b) through (e) of section 312 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1861a) and sections 53702 and 53735 of title 46, United States Code.

(c) Loan Term.--

- (1) In general.--Notwithstanding section 53735(c)(4) of title 46, United States Code, a loan under this section shall have a maturity that expires at the end of the 45-year period beginning on the date of issuance of the loan.
- (2) Extension.--Notwithstanding paragraph (1) and if there is an outstanding balance on the loan after the period described in paragraph (1), a loan under this section shall have a maturity of 45 years or until the loan is repaid in full.
- (d) Limitation on Fee Amount.--Notwithstanding section 312(d)(2)(B) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1861a(d)(2)(B)), the fee established by the Secretary with respect to a loan under this section shall not exceed 3 percent of the ex-vessel value of the harvest from each fishery for where the loan is issued.

(e) Interest Rate.--

- (1) In general.--Notwithstanding section 53702(b)(2) of title 46, United States Code, the annual rate of interest an obligor shall pay on a direct loan obligation under this section is the percent the Secretary must pay as interest to borrow from the Treasury the funds to make the loan.
- (2) Subloans.--Each subloan under the loan authorized by this section--
 - (A) shall receive the interest rate described in paragraph (1); and
 - (B) may be paid off at any time notwithstanding subsection (c)(1).

(f) Ex-Vessel Landing Fee.--

- (1) Calculations and accuracy.--The Secretary shall set the ex-vessel landing fee to be collected for payment of the loan under this section--
 - (A) as low as possible, based on recent landings value in the fishery, to meet the requirements of loan repayment;

- (B) upon issuance of the loan in accordance with paragraph (2); and
- (C) on a regular interval not to exceed every 5 years beginning on the date of issuance of the loan.
- (2) Deadline for initial ex-vessel landings fee calculation.--Not later than 60 days after the date of issuance of the loan under this section, the Secretary shall recalculate the ex-vessel landing fee based on the most recent value of the fishery.

(g) **Authorization.--There is authorized to be appropriated to the Secretary of Commerce to carry out this section an amount equal to 1 percent of the amount of the loan authorized under this section for purposes of the Federal Credit Reform Act of 1990 (2 U.S.C. 661 et seq.).**

BEGICH CHANGES

TECHNICAL AND CONFORMING AMENDMENTS.—

- (1) Section 7306b(b) of title 10, United States Code, is amended by striking “defined in section 3(14)” and inserting “defined in section 3”.
 - (2) Section 3 of the Whale Conservation and Protection Study Act (16 U.S.C. 917a) is amended by striking “including the fishery conservation zone as defined in section 3(8)” and inserting “including the exclusive economic zone as defined in section 3”.
 - (3) Section 114(o) of the Marine Mammal Protection Act of 1972 (16 U.S.C. 1383a(o)) is amended—
 - (A) in paragraph (1), by striking “section 3(8)” and inserting “section 3”; and
 - (B) in paragraph (4), by striking “section 3(27)” and inserting “section 3”.
 - (4) Section 304(g)(2) (16 U.S.C. 1854(g)(2)) is amended by striking “Notwithstanding section 3(2)” and inserting “Notwithstanding the definition of bycatch under section 3”.
 - (5) Section 8(b)(2) of the Lacey Act Amendments of 1981 (16 U.S.C. 3377(b)(2)) is amended—
 - (A) by striking “as defined in paragraph (14) of section 3” and inserting “as defined in section 3”; and
 - (B) by striking “as defined in paragraph (13) of such section 3” and inserting “as defined in such section 3”.
 - (6) Section 302 of the Atlantic Salmon Convention Act of 1982 (16 U.S.C. 3601) is amended—
 - (A) in paragraph (6), by striking “in section 3(10)” and inserting “in section 3’ ” and
 - (B) in paragraph (8), by striking “in section 3(19)” and inserting “in section 3”.
 - (7) Section 3(6) of the Atlantic Striped Bass Conservation Act (16 U.S.C. 5152(6)) is amended by striking “in section 3(6)” and inserting “in section 3”.
 - (8) Section 104(f)(4)(B) of the Compact of Free Association Act of 1985 (48 U.S.C. 1904(f)(4)(B)) is amended by striking “have the same meanings as provided in paragraphs (10) and (14), respectively, of section 3” and inserting “have the same meanings as provided in section 3”.
- Section 104 of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (120 Stat. 3584; 16 U.S.C. 1853 note) is amended—
- (A) by striking subsection (b); and
 - (B) by redesignating subsection (c) as subsection (b).¹⁵⁴
- Section 53706(a)(7) of title 46, United States Code, is amended by striking “section 303(d)(4)” and

154 Begich page 22. Confusing. Section 104 does not contain a subsection (b)

inserting “section 303A”.¹⁵⁵

FISHERY MANAGEMENT PLAN AMENDMENTS.—

Not later than 1 year after the date of enactment of this Act, each Regional Fishery Management Council shall amend each fishery management plan under its jurisdiction to comply with subsections (a)(15) and (e) of section 303 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1853), as amended by section 11 102(a) of this Act.¹⁵⁶

UPDATED AGENCY PROCEDURES.—Not later than 90 days after the date of enactment of this Act, the Secretary of Commerce shall issue a notice of proposed rulemaking to revise and update agency procedures under the mandate of section 304(i) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1854(i)), as added by section 107 of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (120 Stat. 3594).¹⁵⁷

SUMMER FLOUNDER MANAGEMENT. (MAFMC ONLY)

- (a) **IN GENERAL.**—Not later than 1 year after the date of the enactment of this Act, the Mid-Atlantic Fishery Management Council shall submit to the Secretary of Commerce, and the Secretary of Commerce may approve, a modified fishery management plan or plan amendment for the commercial and recreational management of summer flounder (*Paralichthys dentatus*) under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.). The modified fishery management plan or plan amendment shall—
- (1) be based on the best scientific information available;
 - (2) reflect changes in the distribution, abundance, and location of summer flounder in establishing distribution of the commercial and recreational catch quotas;
 - (3) consider regional, coast-wide, or other management measures for summer flounder that comply with the National Standards under section 301(a) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1851(a)); and
 - (4) prohibit the allocation of commercial or recreational catch quotas for summer flounder on a State-by-State basis using historical landings data that does not reflect the status of the summer flounder stock, based on the most recent scientific information.
- (b) **CONSULTATION WITH THE COMMISSION.**—In preparing the modified fishery management plan or plan amendment as described in subsection (a), the Council shall consult with the Atlantic States Marine Fisheries Commission to ensure consistent management throughout the range of the fishery.
- (c) **FAILURE TO SUBMIT PLAN.**—If the Council fails to submit a modified fishery management plan or plan amendment as described in subsection (a) that may be approved by the Secretary, the Secretary shall prepare and approve such a modified plan or plan amendment.
- (d) **REPORT.**—Not later than 1 year after the date of the approval of a modified fishery management plan or plan amendment as described in subsection (a), the Comptroller General of the United States shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Natural

155 Begich page 23 lines 5-7

156 Begich page 22 lines 4-11. Section (a)(15) is “assess the fishery dependent data needs of the fishery and, if necessary to meet those needs, establish an integrated data collection program under subsection (e) to gather and analyze data required for fisheries management” and (e) relates to integrated data collection.

157 Begich page 28 lines 2-10. Section 304(i) requires NMFS to revise and update agency procedures for compliance with NEPA (see Section 304(i))

Resources of the House of Representatives a report on the implementation of the modified plan or plan amendment that includes an assessment of whether the implementation complies with the national standards for fishery conservation and management under section 301(a) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1851(a))¹⁵⁸

STUDY OF ALLOCATIONS IN MIXED-USE FISHERIES.

- (a) **STUDY REQUIREMENTS.**—The National Academy of Sciences, in coordination with the Assistant Administrator for Fisheries of the Department of Commerce, shall conduct a study—
- (1) to determine which variables, including consideration of the conservation and socioeconomic benefits of each sector in a fishery, should be considered by a Regional Fishery Management Council established under section 302 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1852) in allocating fishing privileges in a fishery management plan prepared under that Act; and
 - (2) to determine which sources should be used for such variables.
- (b) **REPORT.**—Not later than 180 days after the date of enactment of this Act, the National Academy of Sciences shall submit a report on the study conducted under subsection (a) to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Natural Resources of the House of Representatives.¹⁵⁹

ELECTRONIC MONITORING.¹⁶⁰

- (a) **SENSE OF CONGRESS.**—It is the sense of Congress that the use of technologies such as digital videocameras and monitors, digital recording systems, and other forms of electronic monitoring as a complement to observers can maintain or increase observer information collected from fisheries while reducing the need for observers and the financial costs and logistical difficulties associated with such observers.
- (b) **ELECTRONIC MONITORING REVIEW.**—Not later than 180 days after the date of enactment of this Act, the Secretary of Commerce, in consultation with the Regional Fishery Management Councils, shall complete and submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Natural Resources of the House of Representatives a review of all Federal fishery management plans that—
- (1) identifies each fishery management plan with respect to which the incorporation of electronic monitoring, as a complement to observers, can decrease costs and improve efficiencies in the fishery while continuing to meet the standards and requirements of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.); and
 - (2) specifies for each fishery management plan identified which type or types of electronic monitoring technology can achieve such cost and efficiency improvements.
- (c) **REGIONAL ELECTRONIC MONITORING ADOPTION PLANS.**—
- (1) **IN GENERAL.**—Not later than 1 year after submitting the results of the review required under subsection (b), each Regional Fishery Management Council, in consultation with the Secretary of Commerce, shall develop a plan to adopt and implement electronic monitoring in each of its fishery management

158 Begich pages 46-48. Does not affect PPMC

159 Begich pages 48-49. Addresses some allocation concerns voiced by recreational fishery interests at MONF.

160 Begich pages 49-51. Calls for a study of how electronic monitoring can be used. In line with Council/MONF recommendations.

plans identified in the review.¹⁶¹

- (2) **ELEMENTS OF PLANS.**—Each plan required by this subsection
- (A) shall include an estimate of anticipated improvements in cost effectiveness and management efficiency for each Federal fishery management plan in the plan;
 - (B) shall prioritize fishery management plans in each region, to guide development, adoption, and implementation of electronic monitoring amendments to such plans;
 - (C) shall set forth an implementation schedule, consistent with the implementation deadline specified in subsection (d), for the development, review, adoption, and implementation of electronic monitoring amendments to Federal fishery management plans; and
 - (D) may be reviewed or amended annually to address changing circumstances or improvements in technology.

(d) **DEADLINE FOR IMPLEMENTATION.**—Not later than 4 years after the date of enactment of this Act, the Regional Fishery Management Councils and the Secretary of Commerce shall complete implementation of the plans developed under subsection (c).

COST REDUCTION REPORT.

Not later than 1 year after the date of enactment of this Act, the Secretary of Commerce, in consultation with the Regional Fishery Management Councils, shall submit a report to Congress that, with respect to each fishery governed by a fishery management plan in effect under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.)—

- (1) identifies the goals of the applicable programs governing monitoring and enforcement of fishing that is subject to the plan;
- (2) identifies methods to accomplish the goals under paragraph (1), including human observers, electronic monitoring, and vessel monitoring systems;
- (3) certifies the methods under paragraph (2) that are most cost-effective for fishing that is subject to the plan; and
- (4) explains why the most-cost-effective methods under paragraph (3) are not required, if applicable.

CAPITAL CONSTRUCTION.¹⁶²

(a) **DEFINITIONS; ELIGIBLE AND QUALIFIED FISHERY FACILITIES.**—Section 53501 of title 46, United States Code is amended— (this is TITLE 46 - SHIPPING; SUBTITLE V - MERCHANT MARINE; PART C - FINANCIAL ASSISTANCE PROGRAMS; CHAPTER 535 - CAPITAL CONSTRUCTION FUNDS)

PROMOTION OF THE FREE FLOW OF DOMESTICALLY PRODUCED FISHERY PRODUCTS (The Act of August 11, 1939)¹⁶³

(b) **Transfer of funds**

- (1) The Secretary of Agriculture shall transfer to the Secretary each fiscal year, ~~beginning with the fiscal year commencing July 1, 1954, and ending on June 30, 1957,~~ from moneys made available to carry out

161 The Council has expressed concern about timelines for electronic monitoring (3/26/14)

162 In essence, this section makes fishery facilities (processors, storage operations and aquaculture operations) eligible for capital construction funds. This was requested by commenters as a way to update and improve shoreside facilities. (Begich page 52 line 20-page 55 line 9)

163 This section is the Saltonstall-Kennedy Act.

the provisions of section 612c of title 7, an amount equal to 30 per centum of the gross receipts from duties collected under the customs laws on fishery products (including fish, shellfish, mollusks, crustacea, aquatic plants and animals, and any products thereof, including processed and manufactured products), which ~~shall only be used for the purposes described under subsection (c). shall be maintained in a separate fund only for—~~

~~(A) use by the Secretary—~~

~~(i) to provide financial assistance for the purpose of carrying out fisheries research and development projects approved under subsection (c) of this section, [1]~~

~~(ii) to implement the national fisheries research and development program provided for under subsection (d) of this section;~~

~~(iii) to implement the Northwest Atlantic Ocean Fisheries Reinvestment Program established under section 1863 of title 16; and~~

~~(iv) to fund the Federal share of a fishing capacity reduction program established under section 1861a of title 16; and~~

(B) the provision of moneys, subject to paragraph (2), to carry out the purposes of the Fisheries Promotion Fund established under section 208(a) [2] of the Fish and Seafood Promotion Act of 1986 [16 U.S.C. 4008 (a)].

~~(2) —There are transferred from the fund established under paragraph (1) to the Fisheries Promotion Fund referred to in paragraph (1)(B) \$750,000 in fiscal year 1987, \$3,000,000 in each of fiscal years 1988 and 1989, and \$2,000,000 in each of fiscal years 1990 and 1991.~~¹⁶⁴

(C) Fisheries research and development projects

(1) The Secretary shall make grants from the fund established under subsection (b) of this section to assist persons in carrying out research and development projects addressed to any aspect of United States fisheries, including, but not limited to, harvesting, processing, marketing, and associated infrastructures.

(2) The Secretary shall-

(A) at least once each fiscal year, receive, during a 60-day period specified by him, applications for grants under this subsection;

(B) prescribe the form and manner in which applications for grants under this subsection must be made, including, but not limited to, the specification of the information which must accompany applications to ensure that the proposed projects comply with Federal law and can be evaluated in accordance with paragraph (3)(B); and

(C) approve or disapprove each such application before the close of the 120th day after the last day of the 60-day period (specified under subparagraph (a)) in which the application was received.

...

(2) LIMITATIONS ON BILLS TRANSFERRING FUNDS.--

(A) **IN GENERAL.**—It shall not be in order in the Senate or the House of Representatives to consider any bill, resolution, amendment, or conference report that reduces any amount in the fund

164 Begich page 73 lines 12+. This addresses concerns that Saltonstall-Kennedy Act funds have been going to NOAA's Operations, Research and Facilities account for general use rather than going to fisheries promotion and development. This section includes language that would establish a budget point of order that could be used during House or Senate consideration of an appropriations bill that authorizes transfer of S-K funds to NOAA's Operations account.

referred to in paragraph (1) in a manner that is inconsistent with such paragraph.

- (B) **LIMITATION ON CHANGES TO THIS PARAGRAPH.**—It shall not be in order in the Senate or the House of Representatives to consider any bill, resolution, amendment, or conference report that would repeal or otherwise amend this paragraph.
- (C) **WAIVER.**—A provision of this paragraph may be waived or suspended in the Senate only by the affirmative vote of three-fifths of the Members, duly chosen and sworn.
- (D) **APPEALS.**—An affirmative vote of three-fifths of the Members of the Senate, duly chosen and sworn, shall be required to sustain an appeal of the ruling of the Chair on the point of order raised under this paragraph.
- (E) **RULES OF THE SENATE AND THE HOUSE OF REPRESENTATIVES.**—This paragraph is enacted by Congress—
 - (i) as an exercise of the rulemaking power of the Senate and the House of Representatives, respectively, and is deemed to be part of the rules of each house, respectively, but applicable only with respect to the procedure to be followed in the House in the case of a bill, resolution, amendment, or conference report under this paragraph, and it supersedes other rules only to the extent that it is inconsistent with such rules; and
 - (ii) with full recognition of the constitutional right of either House to change the rules (so far as they relate to the procedure of that House) at any time, in the same manner, and to the same extent as in the case of any other rule of that House.¹⁶⁵

DRAFT WORKING DOCUMENT

**Comparison between House Bill 4742 and
Senate Magnuson-Stevens Act Reauthorization Discussion Draft**
Page numbers refer to annotated version of Magnuson-Stevens Act.

HOUSE (HR 4742)	SENATE (Begich Discussion Draft)
Overfished/Depleted	
<ul style="list-style-type: none"> Replaces “overfished” with “depleted” throughout. Calls for Report to Congress to distinguish between fish that are depleted due to fishing, and those that are depleted for other reasons (page 80 of annotated MSA) Defines “depleted” as “...with respect to a stock of fish or stock complex, that the stock or stock complex has a biomass that has declined below a level that jeopardizes the capacity of the stock or stock complex to produce maximum sustainable yield on a continuing basis.” (p 10) 	<ul style="list-style-type: none"> Uses the terminology “overfished or otherwise depleted.” (p 80) Defines “depleted” and “depletion” - “The term ‘depleted’ and ‘depletion’ mean, with respect to a stock of fish in a fishery, that the stock is of a size that jeopardizes the capacity of the fishery to produce the maximum sustainable yield on a continuing basis.” (p 10)
Ending Overfishing	
<ul style="list-style-type: none"> The original discussion draft included a provision that would allow phasing of rebuilding plans. This section was removed in the House bill. 	<ul style="list-style-type: none"> No similar provision
Rebuilding Timelines	
<ul style="list-style-type: none"> Rebuilding may not exceed the time the stock would be rebuilt without fishing, plus one mean generation, with exceptions for biology, environmental conditions, international agreements, cause of depletion outside the jurisdiction of the Council, mixed-stock fisheries, informal transboundary agreements, unusual events. Hastings also sets a schedule for reviewing rebuilding progress. (p 81-82) Councils may end rebuilding program if it is determined that a fishery is not depleted. (Wording slightly changed from discussion draft) (p 82-83) 	<ul style="list-style-type: none"> Rebuilding shall be as short as possible, (with current exceptions), and may not exceed the sum of the minimum time required to rebuild an affected stock of fish and the mean generation time of the affected stock of fish, if those time values are scientifically established and widely accepted among fish population biologists; or 10 years, if either of the time values is not scientifically acceptable. (p 81)

ACL Exceptions	
<ul style="list-style-type: none"> • ACLs not required for ecosystem component species, or for species that have life cycles of approximately 1 year (unless subject to overfishing); or for species in which more than half of a single year-class will complete their lifecycle in less than 18 months • In establishing ACLs, Councils may consider ecosystem changes and economic needs of fishing communities • ACLs must take into account management measures under international agreements and informal transboundary agreements • ACLs may be established for stock complexes; ACLs may be set for three years. • (All on page 60-61) 	<ul style="list-style-type: none"> • ACLs not required for fish species with a mean lifecycle of 18 months; species where all spawning & recruitment occurs beyond state waters and the EEZ (unless overfishing is occurring). FMPs do not have to specify ACLs for each species of non-target fish in a fishery. (p 66)
Ecosystem-Based Management	
<ul style="list-style-type: none"> • In establishing ACLs, Councils may consider ecosystem changes • Defines ecosystem component species • Councils do not have to establish ACLs for EC species • (All on page 60) 	<ul style="list-style-type: none"> • Adds wording regarding ecosystems, ocean acidification, human impacts on ecosystems to “findings” (p 5) • Discusses importance of forage fish (p 6) • Adds adoption of EBFM as a purpose of the Act (p 7) • Adds EBFM as a Council member training topic (p 59) • Outlines provisions for creating fishery ecosystem plans (p 74-76). Most of this would not directly affect the PFMC.
Forage Fish	
<ul style="list-style-type: none"> • No similar provisions 	<ul style="list-style-type: none"> • Adds finding that “forage fish are a fundamental component of marine ecosystems” (p 6) • Defines forage fish (p 11) • Outlines the responsibilities of the SSC in regard to forage fish and other matters (p 53) • Sets requirements for determining ACLs for forage species, including a control rule and consideration of the “feeding requirements of dependent fish throughout the range of the dependent fish” (p 62-63)
Electronic Monitoring	
<ul style="list-style-type: none"> • Calls for developing objectives, regulations, schedules and performance standards for use of electronic monitoring (p 152-153). • The House bill allows use of electronic monitoring for law enforcement (p 152) 	<ul style="list-style-type: none"> • The Secretary and Councils shall review FMPs in regard to where electronic monitoring can be used instead of human observers; and each Council shall develop a plan to adopt EM. These plans must be finalized within 4 years. (p 158-159) • Defines integrated data collection programs that are required under 303(a)(15). These are essentially cooperative research programs.

	Emphasizes electronic monitoring; provides for system of fees. (p 66)
NEPA	
<ul style="list-style-type: none"> Adds details on fishery impact statement requirement; fulfillment of these stipulations satisfies the requirements of NEPA (p 65-67) 	<ul style="list-style-type: none"> Requires that MSA Section 304(i) (Environmental Review Process) be implemented by NMFS within 90 days of passage (p 157; see also p 84)
Allocation	
<ul style="list-style-type: none"> No similar provisions 	<ul style="list-style-type: none"> Calls for a regular review of allocation in mixed-use fisheries (p 55) Calls upon the National Academy of Sciences to study variables that should be considered when allocating fishing privileges, and what data sources should be used. (p 158)
International Fisheries	
<ul style="list-style-type: none"> No similar provisions 	<ul style="list-style-type: none"> Designates a Secretarial Representative for International Fisheries; must be a senior official appointed by the President (p 25) Defines IUU to include “fishing activities conducted by foreign vessels in waters under the jurisdiction of a nation without permission of that nation” and “...conducted by foreign vessels in contravention of a nation's laws, including fishing activity that has not been reported or that has been misreported to the relevant national authority of a nation in contravention of that nation's laws” (p 43).
Transparency	
<ul style="list-style-type: none"> Calls for each Council to provide a webcast, audio recording, or live broadcast of Council and CCC meetings; and audio, video, or a searchable audio or written transcript of each Council and SSC meeting online within 30 days of the meeting (page 56). 	<ul style="list-style-type: none"> Calls for an audio or video webcast of each Council and SSC meeting online within 30 days (not live; no transcripts) (page 56)
Data Collection and Use	
<ul style="list-style-type: none"> Describes uses of confidential information. Places limits on use of observer information. Vessel information collected for monitoring/enforcement shall not be used for coastal & marine spatial planning under EO 13547 (pages 131-132). Wording changed from discussion draft. Encourages use of video and acoustic survey technologies (p 153) 	<ul style="list-style-type: none"> Councils must amend FMPs within one year to assess the fishery-dependent data needs of fisheries and establish an integrated data collection program to gather and analyze the data required. (p 63, 66)

Data-Poor Species	
<ul style="list-style-type: none"> Councils shall identify data-poor fisheries in their regions, prioritize them, and provide the list to the Secretary (p 135) 	<ul style="list-style-type: none"> The Secretary shall develop a plan to conduct stock assessments for all fish under FMPs. Includes detailed requirements for stock assessments and assessment schedule (p 136-137)
Seafood Labeling and Fraud Prevention	
<ul style="list-style-type: none"> No similar provisions 	<ul style="list-style-type: none"> In “findings,” states that U.S. fisheries are now being managed sustainably (p 6) Creates a “sustainably caught” label. Producers, processors, etc., MAY place the words “sustainably caught” on fish harvested under the MSA or equivalent state, tribal, or foreign measures, or if it is being effectively rebuilt. Includes cultivated fish. Fish must be labeled through processing, distribution & final sale (p 95-96) Makes it illegal to falsely identify fish products, or to falsely label them as “sustainably caught” (p 103)
National Marine Sanctuaries Act & Endangered Species Act	
<ul style="list-style-type: none"> Notes that in case of conflict between MSA & NMSA, MSA shall control. Also notes that restriction on fisheries that are necessary to implement a recovery plan under ESA shall be done under the authority of the MSA (p 15) 	<ul style="list-style-type: none"> No similar provision
Enforcement penalties	
<ul style="list-style-type: none"> In Sec. 404(e), says the Secretary may allocate a percentage of fishery enforcement penalties for data collection (only for the region in which they are collected). Funds may be used for data-poor fisheries and cooperative research (p 135-136) 	<ul style="list-style-type: none"> Establishes a fisheries enforcement fund, in which fines are deposited for use by the Secretary in enforcement (p 110) Raises civil penalty to not more than \$180,000 (from \$100,000)(p 104)
Other changes	
<ul style="list-style-type: none"> Incorporates the Revitalizing the Economy of Fisheries in the Pacific (REFI) Act, which refinances the groundfish buyback program (p 154-156) Councils may use alternative rebuilding strategies, including harvest control rules and fishing mortality targets (p 82) Emergency actions shall remain in effect for one year (as opposed to 180 days) (p 88) Limitations on harvest in North Pacific Pollock fishery (p 154). No entity may harvest, through a fishery cooperative or otherwise, more than 24% of the pollock available to be harvested in the directed pollock fishery. 	<ul style="list-style-type: none"> Makes fisheries facilities (such as processors) and aquaculture facilities eligible for capital construction funds (p 159) Redefines/refines definition of bycatch (p 8) Gives Councils the authority to use alternative fishery management measures in recreational fisheries (p 55) Includes subsistence fisheries as a sector and refers to subsistence fisheries throughout. The NPFMC must set aside at least 10% of TAC as a community development quota for coastal villages (p 120). Strikes subsection (i) in Section 203 of Public Law 105 (State Authority for Dungeness Crab),

<ul style="list-style-type: none"> • Requires the Secretary of Commerce to publish the estimated cost of recovery from a fishery resource disaster no later than 30 days after making a disaster determination (p 112) • Requires Federal-state partnerships to develop best practices for implementing recreational fishery data collection programs, and create a grant program to States to improve these programs, and require a National Research Council study of recreational fisheries data survey methods (p 129-130) 	<p>which sunsets state authority on September 30, 2016. (Date extended indefinitely) (p 101)</p> <ul style="list-style-type: none"> • Calls for the Secretary to submit annual reports on several special funds such as the Limited Access System Administration Fund (p 85) • Allows NOAA to use agencies other than the Coast Guard for administrative adjudications involving marine resources (p 108) • Reauthorizes Anadromous Fish Conservation Act, Pacific Salmon Treaty Act, South Pacific Tuna Act (see original Begich draft) • The Secretary, with SSCs, shall develop guidelines for greater use of data from nongovernmental sources, including fishermen, fishing communities, universities, and research institutions. The guidelines should identify types of data that can be used as the best scientific information available, especially in regard to recreational fisheries; includes other requirements. Councils shall describe how these data have been used in management, and if they were not used, why not (p 137) • The Secretary and Councils shall report on monitoring and enforcement plans, costs, and methods (p 159) • Addresses concerns that Saltonstall-Kennedy Act funds have been going to NOAA's Operations, Research and Facilities account for general use rather than going to fisheries promotion and development. Includes language that would establish a budget point of order that could be used during House or Senate consideration of an appropriations bill that authorizes transfer of S-K funds to NOAA's Operations account (p 159-161)

FEDERAL LEGISLATION IN THE 113TH U.S. CONGRESS

A summary of Federal legislation introduced in the 113th Congress is provided below. This summary is intended as a general overview for discussion purposes. Full text of these bills, with background information and current status, can be found at the Library of Congress website (<http://thomas.gov>) or at <http://govtrack.us>. These summaries are primarily from the GovTrack.us website, further summarized by Council staff.

New Bills

HR 4742: Strengthening Fishing Communities and Increasing Flexibility in Fisheries Management Act

- **Introduced by** Doc Hastings (R-WA) on May 23, 2014; no cosponsors
- **Status:** Reported favorably by the House Natural Resources Committee.
- **GovTrack chance of passage:** 22%

This bill, which would reauthorize the Magnuson-Stevens Fishery Conservation and Management Act, is attached as Agenda Item C.3, Attachment 2. A summary of the bill in comparison to a Senate discussion draft is attached (Agenda Item C.3, Attachment 1) as well as a marked-up version of the MSA incorporating the changes made by this bill (Agenda Item C.3, Attachment 3).

In his introduction to the House Natural Resources Committee markup on May 29, Chairman Hastings highlighted the following ways in which the bill differs from the discussion draft:

- Three provisions were dropped due to concerns that they would allow overfishing to take place.
- The electronic monitoring provisions were totally rewritten.
- Several provisions were inserted, including a requirement that the Secretary of Commerce report to Congress and the Councils on how much money is collected from catch share fisheries and how that money is used.
- Data confidentiality language was modified.
- Language was clarified regarding the relationship between the Magnuson-Stevens Act and the Endangered Species Act.
- Language was added to encourage and promote the use of cooperative research.
- The text of H.R 2646, the Revitalizing the Economy of Fisheries in the Pacific Act, was added.

At the markup, the Committee approved several amendments to the bill, many of which are directed at other Fishery Management Councils. An additional amendment would require the Secretary of Commerce to publish the estimated cost of recovery from a fishery resource

disaster no later than 30 days after making a disaster determination; another would require Federal-state partnerships to develop best practices for implementing recreational fishery data collection programs, and create a grant program to States to improve these programs, and require a National Research Council study of recreational fisheries data survey methods. Two additional amendments (Garcia.041 and Southerland.030) were not available at the time this report was prepared.

HR 4097: Salmon Solutions and Planning Act

- **Introduced by** Jim McDermott (R-WA) on February 26, 2014; no cosponsors
- **Status:** Referred to several House committees.
- **GovTrack chance of passage:** 2%

This bill would provide Congress and Federal agencies with information on how best to protect and restore wild salmon and steelhead in the Columbia and Snake River Basin while supporting local communities and saving taxpayer dollars. Specifically, it directs the National Academy of Sciences to analyze Federal salmon recovery measures in order to determine the most effective means of protecting and restoring threatened and endangered fish.

The bill:

- Authorizes the National Academy of Sciences to review the measures that may be necessary to recover Columbia-Snake Basin salmon, including an analysis of lower Snake River dam removal.
- Authorizes four peer-reviewed studies by Federal agencies to examine how to cost-effectively replace the primary services currently provided by the lower Snake River dams, in the event Congress or the Administration determines that the dams must be removed. These include a Department of Transportation analysis of transportation upgrades for shipping freight that currently moves via barge on the lower Snake River; a Department of Energy analysis of energy options to replace hydropower generated by the lower Snake River dams; an Army Corps of Engineers analysis of opportunities for restoration and revitalizing the lower Snake River in the event the dams are removed; and a Department of Interior analysis of irrigation or water supply upgrades that would be necessary to ensure that existing water supplies that rely on the lower Snake River would be uninterrupted.
- Clarifies that the U.S. Army Corps of Engineers has the authority to remove the four dams on the lower Snake River in eastern Washington. It does not direct or require the Corps to remove the dams, but it specifies that doing so is within the agency's discretion.
- Authorizes the U.S. Army Corps of Engineers to review and update its 2002 Feasibility Report and Environmental Impact Statement in which it analyzed options for removing the four lower Snake River dams. The bill directs the Corps to consider and address new and relevant information that has emerged since the study's completion in 2002 or that it opted not to incorporate in the original document.

S 2094: Vessel Incidental Discharge Act

- **Introduced by** Mark Begich (D-AK) with Marco Rubio (R-FL) on March 6, 2014; 29 bipartisan cosponsors
- **Status:** Referred to Senate Commerce, Science and Transportation Committee.
- **GovTrack chance of passage:** 24%

The primary focus of the bill is to establish uniform and environmentally sound standards governing discharges incidental to the normal operation of a vessel; specifically on regulating ballast water discharges from commercial non-fishing vessels greater than 79 ft in length. The bill would also require all commercial fishing vessels regardless of size to operate according to a consistent, nationwide system of “best management practices” for discharges incidental to their normal operation as will be required by regulations to be developed (with EPA input) and administered by the US Coast Guard.

The legislation would exempt incidental discharges by commercial vessels of less than 79 feet, fishing vessels including seafood processors, and recreational vessels, as well as discharges that occur for research, safety or similar purposes.

S 2094 is similar to HR 3464, introduced by Frank Lobiondo (R-NJ) and Rick Larsen (D-WA). HR 3464 has been incorporated into HR 4005, the Coast Guard and Maritime Transportation Act of 2014, which has been reported by the House Transportation and Infrastructure Committee.

Bills that have Passed Congress

HR 3080: Water Resources Reform and Development Act of 2014

This bill, which authorizes the U.S. Army Corps of Engineers and incorporates the Levee Vegetation Review Act of 2013, reforms Army Corps of Engineers water resource policy. The bill now goes to the President, who has indicated that he will sign it. Among other things, the bill:

- Increases expenditures from the **Harbor Maintenance Trust Fund** to support increased maintenance (dredging, contaminated sediment disposal) of the nation’s ports. Includes reforms to ensure equity for ports that contribute the most to the Fund but receive little funding in return.
- Establishes the **Water Infrastructure Finance and Innovation Act**, to allow the Corps of Engineers and the Environmental Protection Agency to provide loans and loan guarantees for flood control, water supply, and wastewater infrastructure projects.
- Prioritizes **ecosystem restoration projects** that address identified threats to public health and preserve or restore ecosystems of national significance.
- **Requires the Corps of Engineers to update its guidelines for the removal of vegetation on Corps levees** after seeking public input.
- Establishes procedures for authorizing new, high priority projects while deauthorizing obsolete ones
- Streamlines the project review process

California Drought Bills

HR 3964: Sacramento-San Joaquin Valley Emergency Water Delivery Act

- **Introduced by** David Valadeo (R-CA) on January 29, 2014; 16 cosponsors
- **Status:** Passed House of Representatives on February 5.
- **GovTrack chance of passage:** 28%

This bill was covered in detail in the March staff summary of Federal legislation. Using the current drought as a basis, this bill would overturn California and Federal water laws in order to provide water for agriculture in the San Joaquin Valley.

HR 4039: California Emergency Drought Relief Act of 2014

- **Introduced by** Jim Costa (D-CA) on February 11, 2014; two cosponsors
- **Status:** Referred to several House committees.
- **GovTrack chance of passage:** 4%

This bill is a companion bill to S. 2016 (below). Like S. 2016, it emphasizes flexibility in existing water programs. Among other things, the bill:

- Requires the EPA, Commerce, and Interior to provide the maximum quantity of water supplies possible to Central Valley Project (CVP) and Klamath Project agricultural, municipal, industrial, refuge, and State Water Project contractors, and any other locality or municipality in California by approving, consistent with applicable laws, any project or operations to provide additional water supplies as quickly as possible, if there is any efficient way to do so
- Sets forth actions to be taken to increase water supply, including ensuring that the Delta Cross Channel Gates remain open to the greatest extent possible, requiring the NMFS to recommend revisions to operations of the CVP and the California State Water Project, and adopting a 1:1 inflow to export ratio for the increased flow of the San Joaquin River,
- Requires adherence to the National Environmental Policy Act (NEPA) and the Endangered Species Act; but requires federal agency heads to consult with the Council on Environmental Quality to develop alternative arrangements to comply with NEPA.
- Requires Reclamation to provide water supply planning assistance in preparation for and in response to dry, critically dry, and below normal water year types, upon request, to CVP or Klamath Project contractors or other reclamation project contractors in California, including contractors who possess contracts for refuge water supplies or who deliver refuge water supplies.
- Reauthorizes the Calfed Bay-Delta Act, the Reclamation States Emergency Drought Relief Act of 1991, and the Secure Water Act.
- Amends the Klamath Basin Water Supply Enhancement Act of 2000 to authorize the Secretary of the Interior to take actions to reduce water consumption or demand or to restore ecosystems in the Klamath Basin watershed, including tribal fishery resources held in trust.
- Designates this Act as an emergency requirement for budgetary purposes.

HR 4300: Sacramento Valley Water Storage and Restoration Act of 2014

- **Introduced by** Doug LaMalfa (R-CA) on March 26, 2014; three bipartisan cosponsors
- **Status:** Referred to House Natural Resources Water and Power Subcommittee.
- **GovTrack chance of passage:** 9%

Would authorize, but not fund, the Sites Reservoir Project in northern California. Funding would come from state, Federal, or private investors (possibly from water users). The 14,000 acre Sites Reservoir could store 1.9 million acre-feet of water, with an annual yield of 500,000 acre-feet. An environmental review of the Sites Project is nearly complete and the reservoir could be built within seven years. Water would come from the Sacramento River, as well as the Tehama Colusa and Glenn-Colusa canal systems.

S 2016: California Emergency Drought Relief Act of 2014

- **Introduced by** Dianne Feinstein (D-CA) on February 11 2014; cosponsored by Barbara Boxer (D-CA), Jeff Merkley (D-OR), Ron Wyden (D-OR)
- **Status:** Referred to the Senate Energy and Natural Resources Committee.
- **GovTrack chance of passage:** 6%

This bill, which is essentially an earlier version of S 2198 (below), was described in the March staff summary of legislation. The bill, a “compromise” drought bill, is a Senate alternative to HR 3964 and is similar to HR 4039.

S 2198: Emergency Drought Relief Act of 2014

- **Introduced by** Dianne Feinstein (D-CA) on April 1, 2014; 10 cosponsors including Barbara Boxer (D-CA), Jeff Merkley (D-OR), Ron Wyden (D-OR)
- **Status:** Passed Senate on May 22, 2014.
- **GovTrack chance of passage:** 20%

S. 2198 is largely a revision of S. 2016 (above). Some provisions in S. 2198 were broadened to apply to states outside of California; however, certain provisions remain focused on California water project development, management, and operation. Additionally, S. 2016 contained numerous direct spending provisions that are not included in S. 2198. Overall, S. 2198 directs the Secretary of the Interior, the Secretary of Commerce, and the Administrator of the Environmental Protection Agency (EPA), to undertake numerous actions that would address emergency drought impacts in California and other states, by aiming to increase water supplies for California water users, expanding purposes of program funding for drought mitigation activities, streamlining environmental reviews, providing drought planning assistance, addressing Colorado River water supplies, addressing Klamath River Basin water issues, and addressing the availability of federal emergency disaster assistance in cases of drought. The bill also would reauthorize and modify several water resource management programs.

S. 2198 includes two titles. Title I, “Emergency Drought Relief,” contains 14 provisions ranging from mandating maximization of California water supplies—consistent with laws and regulations—through specific project development, management, and operations directives and addressing project environmental reviews, to reauthorizing several water resources management

laws. Title II, “Federal Disaster Assistance,” addresses application of the Robert T. Stafford Disaster Relief and Emergency Assistance Act to emergency drought situations.

The scope of S. 2198 is fairly broad, and touches upon many long-standing and controversial issues associated with operations of the federal Central Valley Project, managed by the U.S. Bureau of Reclamation, and the State Water Project, managed by the California Department of Water Resources.

Several recreational and commercial salmon fishing groups and other entities have written to the bill’s sponsors in opposition to S. 2198 (see Agenda Item C.3, Attachment 9).

This bill is a companion bill to HR 4039 (above).

Bills Reported by Committee

- **S 224, the San Francisco Bay Restoration Act** (Dianne Feinstein, D-CA), Amends the Federal Water Pollution Control Act to establish a grant program to support the restoration of San Francisco Bay. This Act was reported by Committee on April 3, 2014.
- **S 1275, Revitalizing the Economy of Fisheries in the Pacific (REFI) Act** (Maria Cantwell, D-WA), Replaces HR 2646 (Jaime Herrera-Beutler, R-WA). Directs the Secretary of Commerce to issue a fishing capacity reduction loan to refinance the existing loan funding the Pacific Coast groundfish fishing capacity reduction program. The bill was reported by Committee on April 9, 2014 and is incorporated into HR 4742 (Doc Hastings, R-WA).
- **S 2028, the Sport Fish Restoration and Recreational Boating Safety Act of 2014** (Jay Rockefeller, D-WV), Amends laws relating to sport fish restoration and recreational boating safety. The bill was reported by committee on April 9, 2014.
- **S 2042, the Clean Estuaries Act of 2014** (Sheldon Whitehouse, D-RI), Amends the Federal Water Pollution Control Act to reauthorize the National Estuary Program. Reported by committee on 4/3/14.
- **S 2080, the National Fish Habitat Conservation Act** (Benjamin Cardin, D-MD), A bill to conserve fish and aquatic communities through partnerships that foster fish habitat conservation, enhance fish and wildlife-dependent recreation, etc. Reported by committee 4/3/14.

Senate Resolutions

S.Res. 463: A resolution honoring the life, accomplishments, and legacy of Billy Frank, Jr. and expressing condolences on his passing. (Patty Murray, D-WA). See complete text below.

RESOLUTION

Honoring the life, accomplishments, and legacy of Billy Frank, Jr., and expressing condolences on his passing.

Whereas in the 1850s, the United States Government signed a series of treaties with Washington State tribes under which the tribes granted millions of acres of land to the United States in exchange for the establishment of reservations and the recognition of traditional hunting and fishing rights;

Whereas Billy Frank, Jr., was born to Willie Frank, Sr., and Angeline Frank on March 9, 1931, at Frank's Landing on the banks of the Nisqually River in Washington state;

Whereas the tireless efforts and dedication of Billy Frank, Jr., led to a historic legal victory that ensured that the United States would honor promises made in treaties with the Washington tribes;

Whereas Billy Frank, Jr., was first arrested in December of 1945, at the age of 14, for fishing for salmon in the Nisqually River;

Whereas Billy Frank, Jr., was subsequently arrested more than 50 times for exercising his treaty-protected right to fish for salmon;

Whereas over the years, Billy Frank, Jr., and other tribal members staged "fish-ins" that often placed the protestors in danger of being arrested or attacked;

Whereas during these fish-ins, Billy Frank, Jr., and others demanded that they be allowed to fish in historically tribal waters, a right the Nisqually had reserved in the Treaty of Medicine Creek;

Whereas declining salmon runs in Washington waters resulted in increased arrests of tribal members exercising their fishing rights under the Treaty;

Whereas, on February 12, 1974, in the case of United States v. Washington, Judge George Hugo Boldt of the United States District Court for the Western District of Washington issued a decision that affirmed the right of Washington treaty tribes to take up to half of the harvestable fish in tribal fishing waters and reaffirmed that the United States must honor treaties made with Native American tribes;

Whereas the Ninth Circuit Court of Appeals and the Supreme Court of the United States upheld the Boldt decision, and the treaty tribes became co-managers of the salmon resource in the State of Washington;

Whereas after the Boldt decision, Billy Frank, Jr., continued his fight to protect natural resources, salmon, and a healthy environment;

Whereas the Northwest Indian Fisheries Commission, where Billy Frank, Jr., served as chairman, works to establish working relationships with State agencies and non-Indian groups to manage fisheries, restore and protect habitats, and protect tribal treaty rights;

Whereas Billy Frank, Jr., refused to be bitter in the face of jail, racism, and abuse, and his influence was felt not just in Washington State but around the world;

Whereas Billy Frank, Jr., was awarded the Albert Schweitzer Prize for Humanitarianism, the Common Cause Award for Human Rights Efforts, the American Indian Distinguished Service

Award, the Washington State Environmental Excellence Award, and the Wallace Stegner Award for his years of service and dedication to his battle;

Whereas the legacy of Billy Frank, Jr., will live on in stories, in memories, and every time a tribal member exercises his or her right to harvest salmon in Washington State; and

Whereas the legacy of Billy Frank, Jr., transcends his 83 years and will provide inspiration to those still around today and those still to come:

Now, therefore, be it Resolved, That the Senate--

- (1) honors the life, legacy, and many accomplishments of Billy Frank, Jr.; and
- (2) extends its heartfelt sympathies and condolences to the family of Billy Frank, Jr., the Nisqually Tribe, all Native Americans, and all people around the world who were inspired by his example.

SUMMARY OF FEDERAL LEGISLATION IN THE 113TH U.S. CONGRESS

A summary of relevant Federal legislation introduced in the 113th Congress is provided below. Full text of these bills, with background information and current status, can be found at the Library of Congress website (<http://thomas.gov>) or at <http://govtrack.us>.

HOUSE BILLS

Number	Name of Bill	Notes	Introduced by	Status	Chance of Passage (govtrack.com)
HR 69	Illegal, Unreported, and Unregulated Fishing Enforcement Act of 2013	Strengthens enforcement mechanisms to stop illegal, unreported, and unregulated fishing, to amend the Tuna Conventions Act of 1950 to implement the Antigua Convention, etc.	Madeleine Bordallo, D-Guam (Jan 2013)	Introduced	15%
HR 71	Coral Reef Conservation Act Reauthorization and Enhancement Amendments of 2013	Self-explanatory	Madeleine Bordallo, D-Guam (Jan 2013)	Introduced	4%
HR 584	To amend the Federal Food, Drug, and Cosmetic Act to require labeling of genetically engineered fish	Self-explanatory . Companion bill to S 248 (Mark Begich)	Don Young, R-Alaska (Feb 2013)	Introduced	1%
HR 753	Untitled	Prohibits finfish aquaculture in the EEZ	Don Young, R-Alaska (Feb 2013)	Introduced	3%
HR 764	Coastal State Climate Change Planning Act	Amends the Coastal Zone Management Act of 1972 to require the Secretary of Commerce to establish a coastal climate change adaptation planning and response program	Lois Capps, D-California (Feb 2013)	Introduced	7%

Number	Name of Bill	Notes	Introduced by	Status	Chance of Passage
HR 799	Fisheries Disaster Relief and Research Investment Act	Amends the Saltonstall-Kennedy Act to protect fishing communities.	John Tierney, D-Massachusetts (Feb 2013)	Introduced	3%
HR 1147	To provide limitations on maritime liens on fishing permits, and for other purposes	Limits liens on fishing permits.	Don Young, R-Alaska (March 2013)	Introduced	3%
HR 1308	Endangered Salmon and Fisheries Predation Prevention Act	To reduce predation on Columbia River salmon.	Doc Hastings, R-Washington (March 2013)	Reported by Committee 11/14/13.	14%
HR 1667	Prevention of Escapement of Genetically Altered Salmon in the United States Act	Self-explanatory	Don Young, R-Alaska (April 2013)	Introduced	24%
HR 1927	More Water and Security for Californians Act	Provide congressional direction for implementation of the Endangered Species Act as it relates to operation of the Central Valley Project and the California State Water Project and for water relief in the State of California.	Jim Costa, D-California (May 2013)	Introduced	3%
HR 3063	Healthy Fisheries through Better Science Act	Amends MSA to require stock assessments for all FMP species. Partly included in Begich version of MSA.	Robert Wittman, R-Virginia (August 2013)	Introduced	6%
HR 3080	Water Resources Reform and Development Act (WRRDA) of 2013	Wide-ranging bill authorizes Army Corps of Engineers projects; reforms water resource policy; increases transparency; requires review of levee vegetation policies	Bill Schuster, R-Pennsylvania (Sept 2013)	Enrolled (sent to President)	PASSED
HR 3105	Aquaculture Risk Reduction Act	Exempts animals accidentally included in aquaculture shipments from the Lacey Act.	Rick Crawford, R-Arkansas	Introduced	4%

Number	Name of Bill	Notes	Introduced by	Status	Chance of Passage
HR 3414	Fundamentally Improving Salmon Habitat Act	Would amend WRRDA to provide funding for ecosystem restoration in the Columbia and Tillamook basins. May be partly incorporated into enrolled WRRDA (HR 3080).	Jaime Herrera-Beutler, D-Washington (October 2013)	Introduced.	6%
HR 3464	Commercial Vessel Discharges Reform Act of 2013	Exempts small vessels from certain discharge regulations.	Frank LoBiondo, R-New Jersey (Nov 2013)	Introduced	22%
HR 3533	Endangered Species Management Self-Determination Act	Allow states to manage endangered species protections.	Mark Amodei, R-Nevada (Nov 2013)	Introduced	3%
HR 3964	Sacramento-San Joaquin Valley Emergency Water Delivery Act	Directs water to agriculture; repeals environmental laws.	David Valadeo, R-California (Jan 2013)	Passed House 2/5/14. No action since.	28%
HR 4025	Fishing Safety Training and Research Act	Reauthorizes and amends the Fishing Safety Training Grant Program and the Fishing Safety Research Grant Program.	William Keating, D-Massachusetts (Feb 2014)	Introduced	3%
HR 4039	California Emergency Drought Relief Act of 2014	Similar to S 2016; emphasizes flexibility in existing water programs.	Jim Costa, D-California (Feb 2014)	Introduced	4%
HR 4097	Salmon Solutions and Planning Act	To ensure that proper information gathering and planning are undertaken to secure the preservation and recovery of the salmon and steelhead of the Columbia River Basin.	Jim McDermott, D-Washington (Feb 2014)	Introduced	2%
HR 4300	Sacramento Valley Water Storage and Restoration Act of 2014	Directs the Secretary of the Interior to take actions to support non-Federal investments in water infrastructure improvements in the Sacramento Valley.	Doug LaMalfa, R-California (March 2014)	Introduced (NEW)	9%

Number	Name of Bill	Notes	Introduced by	Status	Chance of Passage
HR 4742	Strengthening Fishing Communities and Increasing Flexibility in Fisheries Management Act	MSA reauthorization bill. Incorporates REFI Act.	Doc Hastings, R-Washington (May 2014)	Reported by committee 4/29/14	22%

SENATE BILLS

Number	Name of Bill	Notes	Introduced by	Status	Chance of Passage
S 45	West Coast Ocean Protection Act of 2013	Prohibits drilling off the coast of California, Oregon, and Washington	Barbara Boxer, D-California (Jan 2013)	Introduced	1%
S 224	San Francisco Bay Restoration Act	Amends the Federal Water Pollution Control Act to establish a grant program to support the restoration of San Francisco Bay	Dianne Feinstein, D-California (Feb 2013)	Reported by committee 4/3/14	20%
S 248	Untitled	Amends the Federal Food, Drug, and Cosmetic Act to require labeling of genetically engineered fish	Mark Begich, D-Alaska (Feb 2013)	Introduced	0%
S 267	Pirate Fishing Elimination Act	To prevent, deter, and eliminate illegal, unreported and unregulated fishing through port State measures	John "Jay" Rockefeller, D-West Virginia (Feb 2013)	Reported by committee 7/13/13	14%
S 269	International Fisheries Stewardship and Enforcement Act	Establishes uniform authorities for the enforcement of the High Seas Driftnet Fishing Moratorium Protection Act and similar statutes	Jay Rockefeller, D-West Virginia (Feb 2013)	Council commented on this. Reported by committee 7/30/13	14%

Number	Name of Bill	Notes	Introduced by	Status	Chance of Passage
S 518	H2O Visa for Seafood Processing Act	Authorizes the issuance of H2O nonimmigrant visas for aliens temporarily performing labor in the seafood processing industry	Mark Begich, D-Alaska (March 2013)	Introduced	1%
S 520	Safety and Fraud Enforcement for Seafood Act	Replaces HR 1012 (Ed Markey, D-MA). To reduce seafood fraud.	Mark Begich, D-Alaska (March 2013)	Introduced	2%
S 542	Maritime Lien Reform Act	Limits maritime liens on fishing licenses.	Lisa Murkowski, R-Alaska (March 2013)	Introduced	0%
S 646	National Endowment for the Oceans Act	Creates a National Endowment for the Oceans to promote the protection and conservation of ocean, coastal, and Great Lakes ecosystems	Sheldon Whitehouse, D-Rhode Island (March 2013)	Introduced	2%
S 839	Coral Reef Conservation Amendments Act of 2013	Reauthorizes the Coral Reef Conservation Act of 2000.	Bill Nelson, D-Florida (April 2013)	Reported by committee 7/30/13	20%
S 1153	Invasive Fish and Wildlife Prevention Act	Self-explanatory.	Kirsten Gillibrand, D-New York (June 2013)	Introduced	3%
S 1254	Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2013	Self-explanatory.	Bill Nelson, D-Florida (June 2013)	Passed Senate unanimously 2/12/14	14%
S 1275	Revitalizing the Economy of Fisheries in the Pacific (REFI) Act	Replaces HR 2646 (Jaime Herrera-Beutler, R-WA). Directs the Secretary of Commerce to issue a fishing capacity reduction loan to refinance the existing loan funding the Pacific Coast groundfish fishing capacity reduction program.	Maria Cantwell, D-Washington (July 2013)	Reported by Committee 4/9/14. Incorporated into HR 4742 (MSA reauth.)	20%
S 1335	Sportsmen's Act.	Aims to ensure public lands are open to fishing and hunting.	Lisa Murkowski, R-Alaska (July 2013)	Reported by committee 7/18/13.	20%

Number	Name of Bill	Notes	Introduced by	Status	Chance of Passage
S 1521	Responsible Seafood Certification and Labeling Act	Prohibits Federal agencies from requiring seafood to be certified as sustainable by a third party nongovernmental organization.	Lisa Murkowski, R-Alaska (Sept 2013)	Introduced	0%
S 1731	Endangered Species Management Self-Determination Act	Amends the Endangered Species Act to permit Governors of states to regulate intrastate endangered species and intrastate threatened species.	Rand Paul, R-Kentucky (Nov 2013)	Introduced	3%
S 2028	Sport Fish Restoration and Recreational Boating Safety Act of 2014	Amends laws relating to sport fish restoration and recreational boating safety.	Jay Rockefeller, D-West Virginia (Feb 2014)	Reported by committee 4/9/14.	47%
S 2016	California Emergency Drought Relief Act of 2014	A “compromise” drought bill focused on flexibility in water allocations rather than repealing environmental laws	Dianne Feinstein, D-California (Feb 2014)	Introduced	6%
S 2042	Clean Estuaries Act of 2014	Amends the Federal Water Pollution Control Act to reauthorize the National Estuary Program.	Sheldon Whitehouse, D-Rhode Island (Feb 2014)	Reported by committee 4/3/14.	28%
S 2080	National Fish Habitat Conservation Act	A bill to conserve fish and aquatic communities through partnerships that foster fish habitat conservation, enhance fish and wildlife-dependent recreation, etc.	Benjamin Cardin, D-Maryland (March 2014)	Reported by committee 4/3/14.	20%
S 2094	Vessel Incidental Discharge Act	To establish uniform and environmentally sound standards governing discharges incidental to the normal operation of a vessel.	Mark Begich, D-Alaska (March 2014)	Introduced	24%
S 2198	Emergency Drought Relief Act of 2014	Directs Interior, Commerce, Agriculture, and EPA to provide additional water supplies to the State of California due to drought.	Dianne Feinstein, D-California (April 2014)	Passed Senate 5/22/14.	20%



Mid-Atlantic Fishery Management Council

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Richard B. Robins, Jr., Chairman | Lee G. Anderson, Vice Chairman

Christopher M. Moore, Ph.D., Executive Director

May 2, 2014

The Honorable Mark Begich
United States Senate
111 Russell Senate Office Building
Washington, DC 20510

Dear Chairman Begich:

I appreciate the opportunity to offer preliminary comments on the initial Senate discussion draft bill to reauthorize the Magnuson-Stevens Fishery Conservation and Management Act. Given the limited time we had to consider the draft, the Council has not had an opportunity to establish an official position on it. For this reason, the following comments will address on a number of high-priority issues that have been identified during previous Council discussions of MSA reauthorization over the past year. We look forward to a future opportunity to comment on the entirety of the bill after it has been formally introduced, and after the full Council has had an opportunity to review and discuss the bill in detail.

It is the position of the Council that the MSA has been highly effective at preventing overfishing and rebuilding overfished stocks and that the current version of the MSA provides a strong framework for successful fisheries management. However, we recognize that some aspects of the law could be improved. In some cases, overly prescriptive management requirements have limited the councils' flexibility to mitigate adverse social and economic impacts, resulting in losses of productivity and unnecessary instability for fishing communities. Some of these issues can be addressed with careful, targeted changes to the law, but we urge you to undertake these changes carefully so as not to compromise the integrity or ambition of the U.S. fishery management standards.

Liaison Voting Rights

The Council has been vocal in its support for vesting the liaisons of the New England and Mid-Atlantic Councils with motion-making and voting rights in the reauthorization. Southern New England states have an important interest in fisheries managed by the Mid-Atlantic Council, and conversely, the Mid-Atlantic states have an interest in a number of important New England-managed fisheries. We believe that these interests could be effectively accommodated by allowing the liaisons to vote. This would require few procedural changes and would ensure that both Councils can preserve their interest in fishery management actions through the final vote. We encourage you to consider revising the draft to include this important provision in the final reauthorization bill.

Stock Rebuilding

We support the inclusion of an alternative, biologically-derived timeline for rebuilding overfished stocks. We also recommend that the arbitrary 10-year rebuilding requirement be eliminated from this section entirely. I note that the phrase "scientifically established and widely accepted among fish population biologists" in this section is nebulous, and would suggest replacing this with clearer requirements or a maximum rebuilding timeline based on a species' mean generation time, consistent

with the current exemption for stocks that cannot be rebuilt within 10 years. I also note that rebuilding timeline requirements should allow Councils to effectively consider and optimize biological, social, economic, and ecological tradeoffs in both the short term and long term.

Forage Fish

The Council believes that forage fish play an important role in the structure and function of marine ecosystems, and we support the inclusion of a requirement to consider the ecological role of forage fish in the quota-setting process. I would recommend that this section not be overly prescriptive, and I note that some of the language characterizing the current status and management of forage fisheries may not accurately describe the current, successful management of some forage fisheries.

Sustainability Standard

We strongly support the inclusion of language regarding a sustainability standard for U.S. seafood and especially appreciate that fisheries being managed under rebuilding plans would be eligible for this label. Our standards for sustainable management are the strongest in the world, and an affirmation of this sustainability would be an important step to facilitate education, awareness, and marketing for the benefit of U.S. fisheries. However, I am concerned that the language in Section 105 regarding catching methodology is overly detailed and may not be relevant to the certification, which is based on the strength of our national standards and the strength inherent in the overall requirements of the Act.

Observer Coverage

We have previously recommended that the Act should strengthen our ability to meet our observer coverage objectives, and we are concerned that this draft does not address the current lack of funding for, or Council authority over, observer coverage. The success of our management programs depends on having effective monitoring and reporting systems in place to help inform catch and bycatch estimates and to detect potential problems in a fishery as early as possible. Not only do these programs require adequate funding to operate, but they require consistent funding from one year to the next. Given the critical nature of these programs, the draft bill should be amended to include specific provisions securing long-term funding for necessary monitoring and reporting programs. Additionally, the regional offices of NMFS, the regional fisheries science centers, and the Councils should have adequate flexibility and discretion to allocate observer coverage and establish coverage requirements to achieve management objectives within our fishery management plans.

We encourage the Committee to explore the feasibility of making the provisions of Section 313 available to all U.S. fishery management councils. Councils should have a broader range of options for funding observer coverage, including cost-sharing provisions, to ensure that U.S. fisheries are adequately monitored, including fisheries that are not managed under Limited Access Privilege Programs.

Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA)

The Council has not contemplated the reauthorization of ACFCMA in this reauthorization discussion. However, based on our experience with the joint management of interjurisdictional fisheries, I would encourage the committee to give careful consideration to measures that would enhance and ensure state and federal coordination. Under the new ACL/AM paradigm required by MSA, the potential for inconsistent management measures between state and federal jurisdictions could compromise the effectiveness of a joint management plan at the expense of federal permit holders. While we have

worked to avoid such outcomes, I would encourage you to consider exploring provisions in this reauthorization that would resolve this risk within these important interjurisdictional fisheries.

Ecosystems

We support, in general, the addition of language that addresses ecosystem-level management objectives. I agree that these provisions should be discretionary; however, I believe that this section is overly prescriptive and redundant to initiatives already underway in the management regions. In fact, the detailed requirements may serve as a deterrent to councils considering implementing ecosystem approaches to fisheries management. This section could be strengthened by removing the specific requirements for fishery ecosystem plans and focusing on providing the councils with the resources and funding needed to develop such plans.

Allocations

As we understand it, Section 101, Subsection D would require the Councils to review allocations among sectors in mixed-use fisheries every 5 to 8 years. The Council supports a provision requiring periodic review of allocations. I would recommend that you clarify the definition of "mixed-use" fisheries and provide guidance on how these reviews are to be conducted.

Summer Flounder

With respect to provisions related to summer flounder in Section 111, the Council has already initiated an amendment to conduct a review of the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan (FMP). This review will include a comprehensive evaluation of the plan's goals and objectives as well as its management strategies for both the commercial and recreational fisheries. We encourage you to consider the work that is already underway by the Mid-Atlantic Council relative to this section of the draft.

Thank you again for the opportunity to provide these preliminary comments on this draft legislation. We will forward formal remarks and a Council position on the legislation following our upcoming June meeting. Please do not hesitate to contact me if you have any questions or would like clarification on any of the comments above. We appreciate your continued interest in our perspective and look forward to future involvement in MSA reauthorization discussions.

Sincerely,

Richard B. Robins, Jr.
Chairman

Cc: Dr. Christopher M. Moore
Mid-Atlantic Fishery Management Council
Council Coordination Committee
Mr. Bob King
Mr. Sean Houton
Mr. Jeff Lewis
Ms. Eileen Sobeck



Mr. Samuel Rauch, III
NOAA Fisheries Service
1315 East West Highway
Silver Spring, MD 20910

Dear Mr. Rauch:

The Marine Fisheries Advisory Committee (MAFAC) offers the enclosed report recommending that the NOAA Fisheries Service develop a seafood sustainability registration program.

In May 2012 MAFAC agreed to develop a framework for a NOAA certification mark or other acknowledgment of the sustainability and origin of domestic fishery products meeting U.S. national standards and regulations. In August 2012 a MAFAC workgroup was formed to carry out the following objectives associated with this goal:

1. Identify a US seafood certification framework including program costs, options and a recommendation for how to pay for it;
2. Identify certification criteria/standards; and
3. Develop a report by the October 2013 MAFAC meeting.

The members of MAFAC, the federal advisory committee responsible for advising the U.S. Secretary of Commerce on living marine resources policy matters, represent a wide range of interests, opinions and expertise from all over the United States and its territories. MAFAC offers these recommendations after engaging in a year-long review, during which MAFAC solicited public input from producers, buyers and non-governmental organizations (NGOs); engaged in personal interviews; conducted surveys; and engaged in extensive internal deliberations. Although a unanimous endorsement was not achieved, this report is supported by a majority of our members.

Our recommendations also recognize the value of the substantial policy process already created by U.S. laws and regulations. As a federal agency with an \$800+ million budget, NOAA Fisheries exercises substantial scientific, regulatory, and enforcement authority to manage sustainable fisheries. NOAA's FishWatch.gov website provides a worthwhile starting point for sustainability information, and NOAA Fisheries should consider additional ways to educate

seafood buyers, sellers, and consumers about the Magnuson Stevens Fishery Conservation and Management Act (MSA) and the resulting framework of fishery management that protects and ensures the sustainability of domestic seafood.

MAFAC is well aware of the various national and international efforts to develop standards for, and consumer awareness of, seafood sustainability, such as the Food and Agriculture Organization of the United Nations' Code of Conduct for Responsible Fisheries; the Marine Stewardship Council (MSC) certified sustainable seafood ecolabel; and the Seafood Watch Program from the Monterey Bay Aquarium. These seafood certifications fill a necessary purpose - especially for fish coming from poorly regulated foreign markets and for U.S. fishery products seeking access to foreign markets.

Rather than endorsing an entirely new seafood certification program, MAFAC recommends a simple framework that offers value to the seafood industry consistent with the agency's legal authorities and minimizes conflicts with existing third-party ecolabels. The envisioned approach would initially focus on wild-caught seafood from federally managed waters, and phase in a process for seafood derived from state-managed commercial fisheries or aquaculture products.

We are pleased to submit these recommendations and look forward to discussing them with you and your staff at your convenience. MAFAC remains grateful for the opportunity to provide advice on these important matters of living marine resource stewardship and sustainability.

Sincerely,

A handwritten signature in black ink, appearing to read "K. Rizzardi".

Keith Rizzardi
Chairman
Marine Fisheries Advisory Committee

Enclosure

MARINE FISHERIES ADVISORY COMMITTEE (MAFAC)
RECOMMENDATIONS ON SUSTAINABLE SEAFOOD CERTIFICATION
December 2013

During MAFAC's investigation, sellers of sustainably-caught U.S. fish, who already comply with the regulatory scheme required by U.S. law expressed concern with the need for certifications or labels from a third-party to demonstrate compliance with the principles of a sustainable fishery. Notably, the principles embodied in the Magnuson Stevens Fishery Conservation and Management Act (MSA) often form the basis for third-party certification efforts, which focus on the statute's ten national standards, such as preventing overfishing, targeting maximum sustainable yield, adopting conservation and management measures, conserving habitat, and using the best available scientific information. In addition, third-party organizations granting certifications to U.S. fish producers frequently rely upon NOAA Fisheries data, research, and analysis when assessing a U.S. fishery's status.

The emergence of multiple third-party certification programs reflects a growing awareness about the importance of sustainable fishing practices. Four of the nation's fishery management councils have called on NOAA Fisheries to develop a certification program. Alaska has developed its own certification program. But consumer-oriented programs are expensive, especially considering the economics of an agency trying to reach millions of seafood consumers. More importantly, according to many seafood sellers interviewed by MAFAC members, consumer-directed sustainability campaigns provide questionable value to consumers, because consumers tend to trust their sellers to make decisions on sustainability and then base their own purchase decisions on price. MAFAC does not recommend the creation of a new certification program to directly compete with other certification programs. Instead, MAFAC recommends creating a less expensive registration program focused primarily on business-to-business transactions.

Certification programs are often composed of three parts: 1) a standards-setting process to define criteria for sustainability; 2) an independent auditing and certification component to determine who meets the standard; and 3) a marketing component to raise public awareness of the brand. When designing its recommendations, MAFAC concluded that NOAA Fisheries should capitalize on existing and available resources, including the:

- Sustainability standards already provided by U.S. laws, especially the MSA;
- Established data collection and fisheries management tools that NOAA Fisheries employs;
- Investigative and auditing skills of the NOAA Seafood Inspection Program; and
- Web-based public information provided on NOAA's FishWatch pages.

RECOMMENDATIONS

Overall Framework: a Domestically-Focused Business-to-Business Registration Program

MAFAC recommends that NOAA Fisheries improve awareness of the MSA and other laws and regulations governing U.S. fisheries and domestic aquaculture, particularly in the domestic business-to-business environment. MAFAC commends the educational efforts undertaken by NOAA Fisheries thus far on FishWatch.gov and encourages more work in this direction. MAFAC recommends that NOAA Fisheries utilize the standards and requirements of the MSA as the reference points to create a business-to-business based approach, recognizing the sustainability of wild harvest seafood products from U.S. Exclusive Economic Zone (EEZ) fisheries in compliance with the MSA. Furthermore, MAFAC also recommends adoption of traceability measures, implemented by buyers to enable subsequent purchasers to track sustainable fishery products in the marketplace.

MAFAC recommends that domestic producers be offered an opportunity, on a fee-for-service basis, to obtain a unique registration number identifying their product as sustainable domestic seafood. With this registration number, sellers of domestic seafood products would be authorized to market their product as “sustainable U.S.A. seafood.” Participation in the program would also require the seller of a registered product to be audited on a fee-for service basis by the NOAA Seafood Inspection Program to periodically verify documentation, police fraudulent marketing practices of misidentification and/or product substitution, and to ensure compliance with applicable laws. MAFAC notes, this approach parallels the concepts advocated in the Agricultural Marketing Act, which established a national policy to promote both wild and farmed U.S. seafood.

Criteria: Compliance with U.S. Fishery Laws Accompanied by Traceability Mechanisms

To qualify as “sustainable U.S.A. seafood” the product would need to be registered as sustainable based on the following criteria which are centered on U.S. laws:

1. Wild-caught fishery products must be legally caught by U.S. fishermen and landed in U.S. ports in accordance with federal (and state – see discussion below) fishery management regulations and environmental laws, including that:
 - a. The particular fishery stock status is known, the fishery is not overfished, and no overfishing occurs.
 - b. NOAA will need to develop additional criteria for fishery stocks where overfishing is occurring, the fishery is overfished, or rebuilding plans are in place, after receiving feedback from stakeholders.
 - c. Rebuilding plans, as discussed above, must be executed and complied with in accordance with regulations promulgated through a fishery management plan or Secretarial action under the MSA.

2. Fishery products must be traceable through a credible, audited chain-of-custody (traceability) program that allows buyers and regulators to trace the source of certified products to its sustainable, legal, domestic source.

FishWatch as a Resource: Confirming Registered Fishery Products

MAFAC also recommends that NOAA Fisheries should establish a process allowing buyers of seafood to confirm that a seller is, in fact, offering sustainable seafood. Buyers should be able to visit and interact with the FishWatch.gov webpage, where the buyer can enter a registration number and confirm that a harvester (or subsequent processors or dealers) has been approved and meets the criteria for producing and/or engaging in the commerce of traceable sustainable U.S. seafood.

In addition, MAFAC notes that NOAA's FishWatch website has generated broad support from the seafood stakeholder community. MAFAC encourages NOAA Fisheries to engage in additional outreach with the industry and NGO community to understand ways that the website could be enhanced by including additional information, such as allowing sellers of registered sustainable seafood products to be searched or listed on the FishWatch webpages.

Traceability: Allowing Industry Participants to Adopt Their Own Measures

MAFAC concluded that the designation of a fishery product as sustainable requires sufficient confidence that the product origin is traceable to the well-managed fishery. Seafood sellers should be allowed the flexibility to choose their method of documenting product traceability, which could include use of third-party products like Trace Register, or other chain of custody procedures. MAFAC does not recommend any singular approach; rather, MAFAC envisions that the NOAA Seafood Inspection Program would evaluate the adequacy of the traceability documentation as part of its audit. NOAA Fisheries may, however, choose to develop policies or rules with criteria for traceability.

Revoking Registration Numbers: Comply with U.S. Law

MAFAC recommends, to the extent allowed by law, that NOAA Fisheries should revoke or suspend registration for harvesters, processors, or buyers who have been convicted of criminal violations of, or multiple civil violations of, the federal Magnuson-Stevens Conservation and Management Act, Clean Water Act, Lacey Act, Marine Mammal Protection Act, Endangered Species Act, or other U.S. laws designed to protect fisheries, ocean habitats, and oceanic species. Convictions for product substitution or fraudulent misrepresentation of species under the MSA, Lacey Act, or other laws should also be grounds for suspension or revocation of registration. In addition, NOAA will need to evaluate whether products from fisheries that become overfished should still be considered sustainable. In some instances, a fishery may be identified as overfished and a rebuilding plan with accountability mechanisms may not yet be in place. During that gap period, NOAA Fisheries may consider temporarily revoking registration numbers.

Independent Audits: the Role of the NOAA Seafood Inspection Program

MAFAC recommends that the necessary registration documentation review and audits should be conducted by the NOAA Seafood Inspection Program, which is skilled in auditing company practices, on a fee-for-service basis. This division of labor is critical since the Seafood Inspection Program's personnel are not paid by NOAA appropriated funds and are supervised independently from the regulators who develop and enforce fishery regulations. MAFAC recommends that the certification scheme preserve the reputation of the Seafood Inspection Program (SIP). As NOAA Fisheries explores the possibility of relying on the SIP, careful consideration should be given to the reputational risk that the SIP may incur.

Economics: Start-up Costs, Recurring Costs, and Fees-for-Service

Taxpayers should not shoulder the costs of implementing business-to-business services that are not currently part of NOAA's budget authorization. Instead, participating companies wanting to obtain a registration number should pay a fee-for-service to NOAA Fisheries to offset these costs. MAFAC recognizes that the initial development and implementation of this recommendation will require some appropriated funding. Initial review by MAFAC suggested some start-up costs. The highest estimate received was \$500,000; other estimates suggest that this limited business-to-business registration number approach could cost as little as \$100,000. Once the program is in place, NOAA Fisheries will also incur costs related to the audit and registration web services; program-related communication expenses, including education, outreach and promotion; program enforcement; and defense of the program from abuses and legal challenges. Estimates for annual operations reached as high as \$1.2 million annually, but if implemented on a fee-for-service basis, some federal staff have estimated annual expenses for seafood sellers who participate in the program could be less than \$1,000 per year. MAFAC encourages NOAA Fisheries to perform the more detailed cost-analysis that was beyond the capacity of the Committee to perform to project the costs of administering such a program.

Legal Authority: Implications for MSA and Beyond

Implementation of this recommendation will take time and may necessitate new authorities. Legislation may be needed to empower NOAA Fisheries to establish a program to create a fee-for-service registration number program and could be considered during as part of the MSA reauthorization process. In addition, rulemaking may be needed to clarify the procedures by which sellers request certification for their products, or what types of traceability programs are acceptable.

Eventually, additional rules may be needed to address the methods for evaluating whether state-managed fisheries have adequate standards in place to achieve sustainability in a manner roughly equivalent to the MSA framework in place for federally-managed waters. Similar rulemaking would be needed for aquaculture operations. If the aquaculture products from state-managed fisheries or aquaculture operations reach those standards, including traceability mechanisms, then they too should be eligible for participation in the registration number program.

Phased Implementation

MAFAC proposes a phased implementation of this recommendation; first for federally-managed fisheries, then later for state managed fisheries and aquaculture, and finally for aquaculture operations in federal waters. NOAA Fisheries might also consider a pilot program, launching a registration process in some states. MAFAC also encourages NOAA Fisheries to engage the stakeholder community in a dialogue, seeking feedback from the business community to ensure the economic viability of this recommended approach, and seeking to better understand the concerns of the NGO community.

Bottom Line: Compliance with the MSA in the U.S.

The underlying premise of the MSA is to ensure the sustainability of U.S. fisheries. NOAA Fisheries should proudly promote and defend the decades of fishery management accomplishments that have made U.S. fisheries some of the most well-managed and sustainable in the world. MAFAC is encouraging NOAA Fisheries to adopt a tool that enables sellers of U.S. wild-caught seafood to show their domestic buyers that they are offering product from a sustainable fishery' as defined by the principles and standards of federal law.

FREQUENTLY ASKED QUESTIONS

During MAFAC's investigation of this subject over the last year, many fisheries stakeholders raised questions about MAFAC's recommendations. Some of these questions are addressed below.

Who can be certified as a seller of registered sustainable seafood? MAFAC's recommendation is to register the product from a sustainably-managed fishery as sustainable. A registration number would be issued for the product, and would be able to be verified on NOAA's FishWatch website. Importantly, MAFAC does not suggest that NOAA certify a dealer or seller. Seafood businesses may source products from a variety of domestic and international sources. Therefore it is up to the seller to choose if some or all of the products sold by their company can or should be registered as sustainable.

What does this mean for existing certification programs? MAFAC offers no specific opinion of any other third-party certification program. In some instances, particular seafood buyers may decide that they want to hold their seafood sources to different economic, environmental, or moral standards that are reflected by other programs. U.S.-based fisheries that are already certified by third-parties can continue to promote their certifications if they so choose.

What about certifying aquaculture programs as sustainable? Although MAFAC makes no specific recommendation regarding the certification of sustainable aquaculture at this time, a program for aquaculture should eventually be considered. Aquaculture operations in the Exclusive Economic Zone are considered fisheries for purposes of NOAA management under the MSA, and therefore must be compliant with the national standards and other MSA requirements. To date, there have been no aquaculture operations in the EEZ under NOAA

management and thus no MSA implementing regulations for aquaculture promulgated, but any future action will need to ensure a sustainable “fishery.” In addition, aquaculture operations in state and federal waters have additional permitting requirements under at least two other federal agency statutes and regulations regarding placement: the Army Corps of Engineers process through its Section 10 permit for structures in navigable waters (that also requires various consultations including Coastal Zone Management Act consistency), and the EPA through its National Pollutant Discharge Elimination System permitting for point source discharges. NOAA Fisheries’ sustainable certification of seafood from aquaculture activities requires interagency coordination to ensure the activity is in compliance with other federal requirements.

Can state-managed fisheries participate? MAFAC recognizes that most state-managed fisheries in the U.S. adhere to fishery management standards parallel to those in the MSA. Once a registration number program is successfully established for federally-managed fisheries, MAFAC recommends that NOAA Fisheries develop appropriate rules or policies to determine whether a state’s standards are sufficiently comparable to the federal MSA standards, should a state wish to participate in the program. The criteria for state-managed fisheries or aquaculture in state waters will need to be developed and additional statutory authority may be needed depending on the final program design. The NOAA Seafood Inspection Program could still audit compliance to whatever criteria might be adopted. In the near-term, the federal government should first focus on federally-managed fisheries followed by state-managed fisheries. Additional consideration should then be given to aquaculture.

If a fishery is overfished, or if overfishing is occurring, is it still sustainable? In some fisheries where stocks are overfished or where overfishing has occurred, MSA implementation and sound fishery management requires a rebuilding plan to be created and in place by a date certain. That plan is designed to rebuild a fishery to maximum sustainable yield. When the fishery is rebuilding, the reduced rate of fishing and managed growth rate of fish populations means that the fishery is sustainable although the annual yield may temporarily be at a level that is less than the optimum yield. The fishery is still being managed in accordance with a data-driven, scientific process managed by a federal agency in compliance with national standards and the MSA requirements. Fish products that come from a fishery managed under a fishery management plan, where stock status data does exist, can still be certified as sustainable, even if the stock is sub-optimal but under a MSA-regulated rebuilding schedule. However, for overfished fisheries that do not yet have a rebuilding plan, and for fisheries where overfishing is occurring, NOAA should obtain additional stakeholder feedback and determine whether these fishery products can be registered as sustainable.

How can NOAA Fisheries declare the fisheries it manages to be sustainable? Some critics of this recommendation have questioned NOAA’s ability to be independent. MAFAC notes that NOAA Fisheries is a credible, science-based agency, with an \$800+ million budget and a history of MSA implementation. But MAFAC also proposes that annual audits be conducted by the NOAA Seafood Inspection Program, an independent auditing office distinct from the regulators at NOAA Fisheries, to ensure that registered seafood products comply with the requirements above.

But what about...?

MAFAC did not achieve consensus on this proposal, and recognizes that this proposal does not solve every problem. NOAA should be aware of the following points that have been emphasized by MAFAC members:

- ***Costs and benefits.*** NOAA Fisheries should only undertake a registration process if it is reasonably priced and beneficial to U.S. fisheries, and should engage in a more robust cost estimate process on the expense of this proposed initiative to ensure that it does not detract from other core agency functions. This program should not create an economic burden for small businesses, and should strive to achieve demonstrable, identifiable, or quantifiable added value to the fishery products in the marketplace.
- ***Global perspectives.*** European and other non-U.S. buyers of fishery products may not accept a NOAA registration number as adequate demonstration of sustainability. They may require third-party verification. However, other MAFAC members note that this proposal focuses on providing a tool for domestic fishery products sold in the domestic marketplace.
- ***The meaning of sustainability.*** There is no explicit definition of “sustainable” or its derivatives in the MSA. The FAO definition is:
The management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment of continued satisfaction of human needs for present and future generations. Such sustainable development conserves (land,) water, plants and (animal) genetic resources, is environmentally non-degrading, technologically appropriate, economically viable and socially acceptable.

According to the MSC:

A sustainable fishery is defined, for the purposes of MSC certification, as one that is conducted in such a way that: it can be continued indefinitely at a reasonable level; it maintains and seeks to maximize ecological health and abundance; it maintains the diversity, structure and function of the ecosystems on which it depends as well as the quality of its habitat, minimizing the adverse effects that it causes; it is managed and operated in a responsible manner, in conformity with local, national and international laws and regulations; it maintains present and future economic and social options and benefits; and it is conducted in a socially and economically fair and responsible manner.

Ultimately the definition is up to NOAA Fisheries as a policy choice unless or until Congress specifies a definition in the MSA. In the meantime, MAFAC’S proposal limits the concept of sustainability to the context of fishery management and science, and does not address other political, social, economic, or environmental issues.

- ***The need for sufficient participation.*** Some commercial fishermen disagree with the need for this program, oppose the government’s role in a certification program, and

questions were raised whether this constituted a national mandate for industry. Some MAFAC members thought that those critiques reflected a misunderstanding of this particular proposal. The success of this program, or any other, depends on reaching a critical mass of buyers and sellers who participate in the process, and the program must be affordable for the registrants and worth the investment of time and money for NOAA Fisheries. Neither the informal surveys conducted by MAFAC, nor the letters opposing this initiative, ensure or disprove the potential for program participation.

- ***State fishery and aquaculture issues remain unresolved.*** Some MAFAC members note that the creation of a sustainability registration program for federal waters could put fishermen in state waters at a competitive disadvantage; similar concerns exist that some fishermen who do not participate in this “voluntary” program might be at a disadvantage compared to others who do. On the other hand, other MAFAC members note that similar dynamics already exist, because some fishermen participate in private certification programs, while others cannot or do not. The availability of an alternative option from NOAA Fisheries might enhance the market access of some fishery products.
- ***The dissonance between rebuilding and sustainability.*** While the proposal above suggests that stocks that are harvested as part of a lawful rebuilding plan can be considered sustainable, some MAFAC members disagree that a fishery in rebuilding status can be considered sustainable. Others suggest that a fishery is sustainable only if its stock status is known, applicable conditions or limits for the fishery are being met, the stock is not overfished, and no overfishing is occurring. Still others suggest that NOAA Fisheries should develop separate science-based metrics for evaluating the performance of a fishery, instead of merely relying upon the implementation of a rebuilding plan. NOAA should consider obtaining additional feedback from NGO and industry stakeholders on this point.

The following additional comments were endorsed by some members of MAFAC, and should be considered by NOAA Fisheries:

- ***Lack of a national mandate from industry.*** Is there stakeholder (i.e., industry, fisherman) support for a NOAA certification program? There is significant objection to a certification program expressed by a substantial portion of the U.S. processing and harvesting sectors. By letter of November 2013, representatives of more than one half of the poundage of federally-managed fish landed in the U.S. submitted public comment to NOAA opposing such a program. These organizations represent both large and small boat fishermen and processors from Alaska, Washington, Oregon, and California.

While testimony was received in support of the program from some regions, it is uncertain what the support would be from industry when industry is told they will a) bear the cost of the program; and b) be at a competitive disadvantage in the marketplace, if they do not engage in a “voluntary” program.

- ***Costs.*** Fishermen who participate in federally managed fisheries already pay significant fees on landings of federally managed fish. Examples of costs deducted from gross landing value are state landing taxes, buyback program costs, observer fees, and cost

recovery programs. Additional fees, even for a “voluntary” program, further burden small businesses, without demonstrable, identifiable or quantifiable added value to the product in the marketplace.

The proposed certification program lacks sufficient detail for the agency to make more than a good faith guess as to costs, whether they be attributable to start up, renewal, appeals, enforcement, or audits.

- ***Status of fisheries affected.*** Concern was expressed by several committee members as to whether federally managed species that are in an ‘overfished’ status would be eligible for certification. The position of some of the members was that if a stock was overfished, even if under a rebuilding plan, it could not be certified as sustainable.
- ***Need for third party verification.*** Legitimate concerns were expressed by committee members as to the credibility, in U.S. and international seafood markets, of whether a federal management agency can independently certify its own work as sustainable. Given that a significant portion of U.S. seafood deliveries are for export to countries that require third party seafood verification, it was unclear what benefit, if any, would come from a NOAA sponsored program.

Information provided to the committee regarding costs of third party certification was anecdotal only, and was widely variable, based on the participant’s personal experience with a specific fishery.

- ***Budget constraints.*** Committee members heard reports from NOAA management regarding declining budgets in real dollars since 2007, the effects of past sequestration actions, as well as concerns for future reductions in the agency’s budget. Regardless of the budget outcome, the message is that NOAA is being asked to do more work with less funding. It is asserted by some committee members that NOAA lacks the financial resources and personnel to assume a new function: that of certifying potentially thousands of small and large businesses involved in harvesting, processing, wholesaling, and distribution of seafood.
- ***Conflict with state fisheries.*** Harvesters and processors in the seafood chain do not catch, process, add value to, sell, or distribute solely those species that are federally managed. Picture the distributor who sells to restaurants both federally managed species and state managed species. What is he to say to his customer, the restaurant? “I can certify these species as sustainable by the U.S. government, but I can’t do so for these other species in demand by your customers—even when those species are also sustainably managed.”

A federal certification process puts state managed fisheries at a disadvantage in the marketplace. To say that we will address the issue of state managed fisheries at another time simply kicks the issue down the road, to the detriment of those species.

- ***Existing programs.*** Members of the committee expressed support for the enhancement and continued support and funding of FishWatch, as a marketing tool for federally

managed species. It's free to all users, has current information, and is easily accessible. In addition, it is noted that a website FishChoice.com, in existence since 2010, currently recognizes over 3000 species, and lists as its partners multiple seafood certification groups and NOAA's FishWatch. The site is free, and allows businesses from very large processors to individual fishing boats to list their products, providing information to individual consumers, wholesalers, dealers, and restaurants.

- ***Lack of clear mission; measurement of outcomes.*** What is the intended outcome? Increased consumption of species that are federally managed? Is there an existing baseline? How many pounds per year does a U.S. citizen consume of federally managed fisheries? How, and by how much, would that percentage possibly increase by a federal certification program? What information are we lacking? What percentage of U.S. fisheries in landings and in value, are already certified by a third party process?

June 2014



Pacific Fishery Management Council

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Dorothy M. Lowman, Chair | Donald O. McIsaac, Executive Director

March 28, 2014

Mr. Dave Whaley
Legislative Staff
House Committee on Natural Resources
Subcommittee on Fisheries, Wildlife, Oceans and Insular Affairs
1324 Longworth House Office Building
Washington DC 2015

Dear Mr. Whaley:

Thank you for the opportunity to address the additional questions that Committee members had following the Committee on Natural Resources legislative hearing on Friday, February 28, 2014 on the discussion draft titled H.R. *"Strengthening Fishing Communities and Increasing Flexibility in Fisheries Management Act."*

My responses to the submitted questions are attached. Please feel free to contact me or Council staff if we can be of further assistance.

Best regards,

A handwritten signature in black ink, reading "Dorothy M. Lowman", followed by a long horizontal flourish.

Dorothy Lowman
Chair
Pacific Fishery Management Council

Committee on Natural Resources
1324 Longworth House Office Building
February 28, 2014
9:30 a.m.

Legislative Hearing on

H.R. _____ *“Strengthening Fishing Communities
and Increasing Flexibility in Fisheries Management Act”*

Questions from Republican Members

Dorothy Lowman, Pacific Council

Question: You note that there is a duplicative aspect to the Magnuson and NEPA statutes and you note that the Magnuson Act already includes a “mandated transparent and participatory process” which is one of the key aspects of NEPA. Are there provisions within NEPA that are not also included in the Magnuson Act that the Committee should consider putting in the Act to make Magnuson more consistent with NEPA?

Response: We thank the Committee for recognizing that the mandate for NEPA streamlining and process efficiencies in the current MSA remains unfulfilled. However, in order to assure consistency with NEPA, we believe that there are other aspects of NEPA that should be explicitly recognized in the Act. In particular, we recommend including language specifically requiring a reasonable range of alternatives and thorough assessment of environmental impacts prior to final Council decision-making to help assure that process efficiencies are achieved while also maintaining robust compliance with the essence of NEPA. We understand the Council Coordination Committee (CCC) is preparing specific language suggestions that can accomplish this goal, and are happy to forward any forthcoming recommendation after the May 13-15, 2014 CCC meeting.

Question: You note that the Council recommends a change to the rebuilding provisions currently in the Act and note that one possible change could be to change the word “possible” to “practicable”. Mr. Rees believes that change this would give Councils the ability to “put off rebuilding indefinitely”. What would be your response to this claim?

Response: In suggesting that changing the requirement to rebuild as soon as practicable rather than the current “as soon as possible” language, it was not our intent that Councils be able to put off rebuilding indefinitely. In fact, Congress has used the term “practicable” deliberately and effectively when they amended the Act in 1996 with respect to National Standard 9 and associated requirements for conservation and management measures to minimize bycatch and associated mortality to the maximum extent practicable. In the Congressional record there is recognition that this term was chosen deliberately and requires an analysis of the costs associated with the action but does not allow Councils to ignore their responsibility relative to minimizing bycatch. Similarly, we believe that such a change would not allow Councils to ignore their responsibility to develop reasonable and effective rebuilding plans within the maximum time

allowed in the Discussion Draft (tied to scientific advice on the mean generation time of the fish stock involved), but would allow the Council to exercise flexibility within that timeframe to account for the needs of communities. It may, however, be useful to include discussion in the Congressional record as was done in 1996 to provide clarity with respect to Congressional intent with the use of the word “practicable.”

Question: The Discussion Draft includes language that would allow a Council to terminate a rebuilding plan if, after a new stock assessment is completed, it is determined that the stock was not overfished. Some have argued that this provision would give Councils unlimited authority to negate rebuilding plans whenever they want. This provision was included in the Discussion Draft specifically due to a situation in the Pacific Region where NOAA determined that a fishery was overfished, later determined that it had not really been overfished, but told the Council that the rebuilding plan had to remain in effect once it had been adopted. Is that correct? Do you view that provision as giving Councils unlimited authority to negate rebuilding plans?

Response: There was a case with widow rockfish in the Pacific Council area, whereby a new stock assessment showed a stock status below the overfished level and the Pacific Council developed a rebuilding plan that restricted fisheries so as to rebuild the stock to the maximum sustained yield biomass. During a subsequent stock assessment, the best available science was revised and showed that the widow rockfish stock had never fallen to the overfished level threshold. Based on discussions at the Pacific Council table that included policy and legal NOAA representatives, the Pacific Council continued with the rebuilding plan and associated fishery restrictions through the balance of the rebuilding plan, until they were officially rebuilt in 2012.

The Discussion Draft language could be subject to different interpretations, and in our view does not specifically address what happens when a new stock assessment shows a stock was NEVER overfished. We recommend language be explicit in specifying that stocks later determined never depleted (overfished) should not be held to rebuilding provisions. The current draft could be read to say that you could suspend the rebuilding plan once the stock is not technically depleted even though it is not fully rebuilt. In these cases, the Pacific Council is in favor of continuing rebuilding plans until the stock reaches its maximum sustained yield biomass level, which is typically significantly higher than the depleted threshold.

Question: There has been much discussion about how well the council process works including providing a transparent public process. Do you believe that process should also be used when restrictions to fisheries which are managed under fishery management plans are required as a result of the Endangered Species Act?

Response: We believe that involving the Council, with its transparent public process and advisory body expertise, when developing management responses to ESA-related issues leads to better decision-making. The Pacific Council is currently comfortable with the kind of ESA integration with MSA that has recently been occurring in the Pacific Council forum for Pacific salmon in terms of enhanced transparency of the scientific and policy basis for determining appropriate fishery restrictions. This process has included the Council making recommendations

that the Secretary has taken seriously. However, it is not clear that this is currently the practice in other Councils.

Question: You note that your Council has created an ecosystem fishery management plan and have already implemented protections for forage fish. Do you believe it is necessary to mandate that all Councils create ecosystem plans and protect forage fish?

Response: While we think that creating ecosystem plans should be encouraged and that forage fish are an important part of the ecosystem, the Pacific Council has not taken the position that it is necessary have a mandate in the Act requiring such action.

Question from The Honorable Joe Garcia

Question: Ms. Lowman: We have heard a great deal about the importance of socioeconomic considerations in the reauthorization of this Act. Assessing the impacts of fisheries management decisions on fishermen and their communities requires the collection and analysis of very specific economic data – data that would be shielded by very strict confidentiality rules under this draft legislation. Would this limited access to data inhibit the councils and others from evaluating economic impacts? Could these restrictions also hamper attempts to institute cooperative research and management programs?

Response: Under the interpretation of current confidentiality requirements of MSA, we are sometimes challenged in fully analyzing the impacts of management alternatives. Therefore, we do not wish to see further tightening of confidentiality rules but instead recommend improving access to currently confidential harvest or processing information for purposes of enhanced socioeconomic analysis. There are instances where the Pacific Council has struggled with balancing the needs of fishing communities with proper conservation of fish stocks, and assessing how much an additional increment of conservation affects community business activity cannot be determined because the necessary socioeconomic data is not available.

Additionally, interpretation of current confidentiality requirements have also challenged the development of cooperative partnerships. On the west coast, as part of the trawl groundfish catch share program, a number of voluntary industry partnerships have developed to collectively better manage the constraining species held in order to most effectively access healthy target stocks. Cooperative or risk pool members' and managers' ability to voluntarily share data among fishery participants in order to facilitate these co-management partnerships have been hindered at times by agency concerns that requests by fishermen to share their own data would violate confidentiality rules. For this reason, further tightening of confidentiality rules under MSA could inadvertently hamper important co-management arrangements.

Questions for the record from Congresswoman Hanabusa

Question: I understand that regional fishery management council budgets have fluctuated significantly since 2012. What is the current budgetary situation for the councils and how do you see this affecting your operations?

Answer: The current budget situation (FY 2014) for Regional Fishery Management Councils (RFMC) remains unclear, pending Congressional approval of a spending plan submitted by the National Marine Fisheries Service (NMFS). On February 25, 2014 the Council Coordinating Committee requested NMFS reconsider its initial plan to reduce funding from what had been expected (see attached letter), but were informed on March 18, 2014 that while calculation corrections would be made to allocations, the policy decision had been made to forward a spending plan to Congress that called for \$1M less funding to the Regional Fishery Management Councils (RFMCs) than expected.

From the Pacific Council perspective, we feel it is important to receive adequate funding to accomplish the important obligations under the MSA. The amount to be received under the NMFS proposed spending plan is inadequate for the kind of operational activity needed at the Pacific Council. We feel the FY 2012 level of funding--which was stable at the 2011 level is the minimally adequate level that should be allocated by the NMFS for FY 2014, given the circumstances at hand. We also note that the total funding provided to the NMFS in FY 2014 is greater than FY 2012.

The effect of any funding shortage on Council operations will be determined after a final Congressional decision is made and the Pacific Council's Budget Committee considers alternatives. As the MSA reauthorization process proceeds, a new way of providing the proper appropriation to RFMC should be considered.



Regional Fishery Management Councils Coordination Committee



February 25, 2014

Ms. Eileen Sobeck
Assistant Administrator
National Marine Fisheries Service
1315 East West Highway
Silver Spring, MD 20910



Re: FY 2014 Funding Allocation to Regional Fishery Management Councils

Dear Ms. Sobeck,



Thank you for the presentation of Mr. Paul Doremus February 19, 2014 on the status of FY 2014 National Marine Fisheries Service (NMFS) budget and current thinking on the allocation to Regional Fishery Management Councils (RFMC) at this time. As we understand the current state of spending plan development at this time, key information is as follows in terms of spendable dollars.



<u>Funding Category</u>	<u>FY 2012</u>	<u>FY 2014</u>
NMFS Total Budget	\$895.0 M	\$992.3 M (\$917.3 absent the \$75 M Disaster Fund)
NMFS ORF Budget	\$804.7 M	\$812.6 M
RFMC Allocation (all PPAs)	\$28.2 M	\$26.5 M



Preparatory to this meeting, the RFMC were under the impression that a reasonable allocation in terms of spendable dollars would be approximately at the FY 2012 level and that agency management and administration user-costs would not be charged to RFMC in FY 2014, contingent to an in-depth discussion of the relevant issues at this meeting that was to be preparatory to FY 2015 decision-making. There are several components and ramifications of the described approach to resolve agency management and administration user-cost charges that remain unclear at this point.



The RFMC view the best barometer of Congressional intent for an RFMC allocation of traditional line items to be the Regional Councils and Commissions line item, which was \$31.8 M in FY 2012 and \$32.0 M in FY 2014. Given this, the key partnership role the RFMC play in the NMFS core mission, and the status of the NMFS budget, the RFMC request that you reconsider the current state of spending planning to reflect an allocation of \$28.2 M in spendable dollars, reflecting stability with the FY 2012 status of funding.

On behalf of the eight RFMC,

A handwritten signature in black ink, appearing to read 'TRB' followed by a stylized flourish.

Rick Robbins
2014 CCC Chairman

cc: RFMC Chairs, Vice Chairs, and Executive Directors
Paul Doremus
Sam Rauch
Alan Risenhoover
Emily Manashes

**Golden Gate Salmon Association
Humboldt Fishermen's Marketing Association
West Marine • Crab Boat Owners Association
California Sportfishing Protection Alliance
Pacific Coast Federation of Fishermen's Associations
Northwest Sportfishing Industry Association
Fishermen's Association of Moss Landing
Port Orford Ocean Resource Team • Water 4 Fish
Fishermen's Marketing Association of Bodega Bay
Ilwaco Charter Association • Monterey Fish Market
Small Boat Commercial Salmon Fishermen's Association
Golden Gate Fishermen's Association
Hudson Fish Company • Coastside Fishing Club
Port San Luis Commercial Fishermen's Association
Pacific Rival Fisheries • Coast Marine & Industrial Supply
Save The California Delta Alliance • Mission Peak Fly Anglers
Institute for Fisheries Resources
Northern California Council, International Federation of Fly Fishers
Half Moon Bay Seafood Marketing Association
And
Individual Fishing Vessel Captains**

The Honorable Dianne Feinstein
United States Senate
331 Hart Office Building
Washington, DC 20510

The Honorable Barbara Boxer
United States Senate
112 Hart Office Building
Washington, DC 20510

The Honorable Harry Reid
United States Senate
522 Hart Office Building
Washington, DC 20510

The Honorable Jeff Merkley
United States Senate
313 Hart Office Building
Washington, DC 20510

May 19, 2014

Dear Senators Feinstein, Boxer, Reid, and Merkley:

RE: Opposition to S. 2198

We are writing as members of the California and Oregon salmon fishing community to express our opposition to the current version of the Emergency Drought Relief Act of 2014 (S. 2198). As currently written this measure could decimate California's salmon industry and seriously harm Oregon's ocean salmon fishery.

As you know, Central Valley (Sacramento-San Joaquin Rivers and their tributaries) salmon constitute the second largest population of these fish in the lower 48 – only the Columbia River system is larger. Central Valley salmon – principally the fall-run chinook (king salmon) – are the backbone of our fishery accounting for approximately 90 percent of California's production and upwards of 60 percent of Oregon's ocean salmon catch. Our Central Valley salmon stocks support an industry that employs an estimated 23,000 workers in California and half that many in Oregon. Many of our coastal, and inland fishing communities, depend on salmon production to stay afloat.

We appreciate the stated goal of the bill - to expedite drought relief actions that are consistent with state and federal environmental laws and to bring people together to address this crisis. We agree that Californians should come together to help water-strapped cities, farming communities, and our natural environment during these very challenging times. However several provisions of S.2198 would seriously weaken the 2009 salmon biological opinion which has greatly helped not only listed winter and spring run chinook salmon stocks, but also the economically valuable fall run that our fishery depends on.

The 2009 biological opinion has greatly improved salmon stocks and delivered us from the extremely low population numbers created by conditions before the BiOp. Those low years caused the complete shutdown of the ocean salmon fishery in 2008 and 2009 – the first time in history - something we never want to experience again.

Our specific concerns include:

- **Section 103(b)(4)** would lock in a 1:1 ratio of inflow to exports, affecting the amount of the San Joaquin River's flow that can be diverted by massive pumps in April and May, when salmon and steelhead are migrating down the river to the ocean. In a critically dry year like this one, existing protections allow the pumps to divert all of the water flowing down the San

Joaquin River (a 1:1 ratio of inflow to exports). However, the ratio increases to better protect migrating salmon from being pulled into the pumps as hydrology improves; for example, the ratio is 2:1 in a “dry” year as opposed to a “critically dry” year. As written, this high 1:1 export ratio – very harmful to all juvenile salmon attempting to escape the massive pull of the diversion pumps in April and May – could continue despite a significant increase in precipitation, either this year or in future years while the Governor’s drought declaration is in effect. This concern is not hypothetical, as the last drought declaration, issued in 2008, was not lifted until 2011, long after the drought was over.

State and federal fisheries agencies have exercised significant discretion this year in implementing the BiOps, with regard to the requirements addressed in this legislation. In fact, we are concerned that they have been so responsive to the concerns of water users that they may have significantly harmed the environment and the salmon fishery. Simply put, such provisions to increase water deliveries this year are moot and, in light of the actions of state and federal agencies, unnecessary.

Finally, we are very concerned that passage of S. 2198 could lead to additional rollbacks of environmental protections in negotiations with the sponsors of H.R. 3964 (Valadao (R-CA)). This radical House legislation would override state and federal environmental protections in the California Bay-Delta ecosystem and likely lead to the shutdown of our salmon fishery and California’s San Joaquin River Restoration Program.

The drought was not caused by the limitations in the BiOps. Relaxing environmental protections will not eliminate the significant water shortages experienced by some farmers and cities. It could, however, result in lasting damage to our community. Rather than focusing on weakening environmental protections, we urge you to focus on pro-active solutions, such as the measures included in Congressman Huffman’s H.R. 4239, Senator Boxer’s draft drought bill and the State of California’s drought funding legislation.

We look forward to working with you to respond to the impacts of the drought on California, including impacts on the environment, the salmon fishery and our communities. Thank you for your consideration of our coastal and inland communities that depend on the salmon fishery.

Sincerely

John McManus, Executive Director
Golden Gate Salmon Association

Randy Repass, President
West Marine

Zeke Grader, Executive Director
Pacific Coast Federation of
Fishermen’s Associations

Leesa Cobb
Port Orford Ocean Resource Team

Bill Jennings, Executive Director
California Sportfishing Protection Alliance

Larry Collins, President
Crab Boat Owner’s Association

Liz Hamilton, Executive Director
Northwest Sportfishing Industry Association

Richard Pool, President
Water 4 Fish

Aaron Newman, President
Humboldt Fishermen's Association

Chuck Cappotto, President
Fishermen's Marketing Association
of Bodega Bay

Paul Johnson, President
Monterey Fish Market

Marc Gorelnik, Chair
Coastside Fishing Club

Mike and Yvette Hudson
Hudson Fish Company

Chad Dahlberg, President
Pacific Rival Fisheries

Pietro Parravano, President
Institute for Fisheries Resources

Dr. C. Mark Rockwell
Northern California Chapter
International Federation of Fly Fishers

Aaron Longton, *F/V Goldeneye*

Barbara Emley, *F/V Autumn Gale*

Mark Davis, *F/V Billie Kaye*

Roger Thomas, President
Golden Gate Fishermen's Association

Butch Smith, President
Ilwaco Charter Association

Kathleen Fosmark, President
Fishermen's Association of Moss Landing

-4-

Butch Powers, President
Port San Luis Commercial Fishermen's Association

Frank Gee
Small Boat Commercial Salmon Fishermen's Assn.

Steve Schramm, Chair
Mission Peak Fly Anglers

Jan McCleery
Save The California Delta Alliance

Benjamin Platt
Half Moon Bay Seafood
Marketing Association

David Bitts, *F/V Elmarue*

Duncan MacLean, *F/V Major Steppen Stone*

Al Ritter, *F/V Mickey*

cc: Pacific Fishery Management Council

PROPOSED AGENDA
Legislative Committee

Meeting by Webinar
June 11, 2014

WEDNESDAY, JUNE 11, 2014 – 9:30 A.M.

A. Call to Order

Dave Hanson

1. Webinar Instructions and Protocols
2. Introductions
3. Approval of Agenda

B. Discussion of Senate MSA Reauthorization Discussion Draft

Bob King

C. Discussion of H.R. 4742 (House MSA Reauthorization Bill)

Jennifer Gilden

D. General Discussion

E. Public Comment

F. Develop Report to Council

G. Future Meeting Plans and Other Business

ADJOURN

PFMC
05/6/14



State of Washington
DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: 600 Capitol Way N • Olympia, WA 98501-1091 • (360) 902-2200, TDD (360) 902-2207
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June 3, 2014

The Honorable Mark Begich
United State Senate
111 Russell Office Building
Washington, DC 20501

The Honorable Marco Rubio
United State Senate
284 Russell Senate Office Building
Washington, DC 20510

RE: Washington Department of Fish and Wildlife – Initial Comments on “Discussion Draft”
proposal on the “Magnuson-Stevens Fishery Conservation and Management
Reauthorization Act of 2104”

Dear Senators Begich and Rubio:

We thank you for the opportunity to comment on the staff working draft of the “Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2014” dated April 3, 2014. We offer some brief overarching comments, comments on general topics that appear in several sections of the Bill, and then comments on specific sections (enclosure). We very much appreciate the inclusiveness in outreach from both the Senate and House on this evaluation of the Magnuson-Stevens Act (“MSA”).

As an opening matter, we view our roles on the Pacific and North Pacific Councils as essential to our stewardship mandates and focus our attention on how we see the Bill’s proposals potentially affecting our ability to carry out that mandate. From our perspective, the MSA is working well. Short of the expiring Dungeness crab authority and the need to authorize appropriations, we do not view any amendments to the law as absolutely necessary at this point. The statute currently allows the Councils flexibility to address many of the policy goals addressed in the Bill. We agree that improvements could be made, and understand how Congress may wish to enact more specific mandates in some areas, yet we do not see any urgency in making them.

We also highlight concerns we and many others hold about the workload and budgets of the Councils and the National Marine Fisheries Service (NMFS). Our biggest concern is that amendments to the law would detract from the current core capabilities, stock assessment and monitoring activities in particular. While we do see room for new initiatives, we have some

concern that certain new initiatives, or multiple new initiatives, could push workload pressures too far and require of reprioritization of staff and budgets that are already dedicated to core fisheries management activities.

Comments on General Initiatives

1. WDFW's highest priority - State authority for dungeness crab fishery management

We are grateful that Sec. 306 of the Bill proposes repeal of the sunset provision on the added authority of Washington, Oregon, and California to enforce state rules in the Dungeness crab fisheries. The coordinated management and enforcement programs of the three states have proven effective. If this were to change, subsection (f) of the law allows the Pacific Council to recommend Council management of the fishery. We view the Council as an appropriate forum for such deliberations if the interest in changes to management were to arise.

2. Subsistence fishing and tribal governments

We are supportive of the provisions that would add explicit recognition of subsistence fishing and tribal governments to various sections of the statute. Our one concern would be making subsistence fishing a "balance" requirement for Council representation. We note that the Bill would not amend the provisions regarding tribal representation on the Pacific Council. We think the current provisions on Pacific Council representation are appropriately limited to tribes with federally recognized fishing rights.

3. Proposed Changes to the MSA's Bycatch Provisions

We are very supportive of attention to fisheries bycatch issues and would be supportive the Bill's proposed modification to the Act's statement of policy on bycatch. At the same time, we have concerns about how the Bill's proposed definitions of "bycatch" as well as those for "target" and "non-target" stocks. Our concern would be that they might alter the existing framework of the statute and require unnecessary re-analysis of how stocks are classified in FMPs. At the same time, we note that the Bill does not propose amendments to National Standard 9 where the statute's main substantive provisions on bycatch are found. It is therefore somewhat unclear as to the effect the proposed changes would have on actual bycatch management.

The Pacific and North Pacific Councils pay considerable attention to bycatch. Both Councils manage multispecies fisheries and strive to understand the risk posed by fishing to all species encountered. For instance, analysts at the Pacific Council identified over 400 different fish and invertebrate species encountered by the Council's groundfish fisheries, most of them in minor amounts. If the intent is to more precisely categorize types of bycatch (as put forth, in staff's "Highlights" document), we see the major distinction being between catch of stocks where

overfishing is at risk and those where bycatch is of concern for other reasons. The Endangered Species Act and Marine Mammal Protection Act protections are some of the other reasons as are concerns about wasteful fishing practices and general ecological considerations.

The Bill's proposed definitions of target and non-target stocks appear to derive from those in the National Standard 1 Guidelines. Those terms have been most meaningful as part of the Guidelines' recommended "in the fishery" and "ecosystem component" framework for determining which stocks require annual catch limits (ACLs). ACLs are focused on preventing overfishing and the "in the fishery" framework helped the Councils identify stocks where overfishing is of high enough concern to employ them (or in the reverse, where concern was sufficiently low so that ACLs were deemed unnecessary). The definitions of "target" and "non-target" stocks were helpful but we do not see them as determinate for every stock. For example, there are some non-target stocks that are not retained by the great majority of fishing vessels, like Spiny Dogfish at the Pacific Council, yet where bycatch is high enough that overfishing is still of potential concern. We draw connections to this issue in our comments under Sec. 102 as well.

We think the MSA's existing framework for bycatch is adequate and offers the Councils flexibility to address wasteful and otherwise environmentally harmful bycatch problems. We do recognize that bycatch is still controversial in some fisheries, the drift gill net fishery at the Pacific Council being an example where we have long had concerns. Yet we see more potential for confusion with the Bill's proposed definition of bycatch than we do practical benefit.

4. Improvements to forage fish management – Proposal to consider amendments related to new fisheries

We support the policy goals of the Bill's forage fish provisions. Washington's Fish and Wildlife Commission has long had a policy for precautionary management of forage fish. At the same time, we have heard of some concerns about the proposed definition of forage fish being too broad. While we fully support the policy of taking the ecological importance into account when setting annual catch limits and defining optimum yield, we also have some concern about a definition that would be overly limiting in either direction. The existing framework of National Standard 1 and definition of optimum yield call for the Councils to weigh the trade-off between harvest and the ecological values of all stocks. Further emphasis on this requirement, as well as resources for the requisite science, would be preferable to a statutory definition.

We would also have concern about a mandatory requirement for addressing "the feeding requirements of dependent fish throughout the range of the dependent fish." We support the concept, yet the science is not there for most species in the Pacific to make such determinations. At the Pacific Council, Pacific sardine is the best studied forage fish and the Council's harvest

policy involves a set aside for ecological and precautionary considerations. Yet the amount set aside is viewed as arbitrary from a scientific point of view because it was established without ecological analysis. The Council's policy is intentionally precautionary, yet the state of the science is that we do not know how well the amount truly addresses feeding requirements. With such high uncertainty, we would prefer that ecological considerations be left to be addressed on stock by stock bases as necessary and appropriate. In addition, we would be concerned that a blanket mandate might require study of stocks where harvest is low and the question of ecological requirements would be largely academic.

An alternative way of improving forage fish management might be to address an area in which the MSA is lacking in our view—its approach to new fisheries. Preventing new fisheries from developing on forage fish until the ecological consequences can be weighed is sound conservation policy. This has been the main issue with forage fish at the Pacific Council. The Council's preferred policy has been to not allow any new forage fish fisheries to develop until there has been time for adequate consideration of the socioeconomic and ecological benefits and costs. The deliberations have only taken so long because of NMFS' lack of comfort with the MSA's authority for establishing such a proactive management approach. Other efforts like the Pacific Council's preventative ban on krill fisheries and the North Pacific's Arctic Fishery Management Plan (FMP) have likewise taken more effort than they reasonably should both also because of this same issue with the MSA's framework for addressing the potential for new fisheries.

To address this issue, we would suggest considering amending the statute to grant the Councils explicit authority to proactively recommend conservation and management measures, or alternatively, to require the Councils to affirmatively endorse a new forage fish fishery. The fact of the matter is that it takes more environmental analysis and review to make relatively minor adjustments to regulations in an existing fishery than it would to start a new fishery on forage fish. This is because no affirmative action by NMFS or the Councils is required for a new fishery to start up. There is no decision by the Council or NMFS needing analysis or documentation in the administrative record. The MSA's approach to new fisheries was appropriate in the era when the law first passed. Yet the reactive approach is now out of step with the rest of the statute's precautionary framework.

Finally, given that the reauthorization process has just begun, please consider the WDFW comments as "initial." We would be pleased to engage in further discussion as the draft is further developed.

The Honorable Begich
The Honorable Rubio
June 3, 2014
Page 5

Thank you for the opportunity to provide these comments. If you have questions, please contact Michele Culver (360) 249-1211, or Bill Tweit (360) 902-2723.

Sincerely,



Philip Anderson
Director

Enclosure

cc: Michele Culver
Bill Tweit
Corey Niles
Jennifer Quan

Section by Section Comments

SEC. 3. CHANGES IN FINDINGS, PURPOSES, AND POLICY

The Bill’s proposed findings and statements of purposes and policy are consistent with how certain conditions and attitudes have changed at the Pacific and North Pacific Councils since the Act was last amended. We note some concerns below about statutory findings proposed elsewhere in the Bill.

SEC. 4. DEFINITIONS

As discussed above, we do not understand the need for or intended policy effect of the proposed definition of bycatch, target, or non-target stocks.

Please see below for our comments on the Bill’s Sec. 104(d) for our thoughts on the proposed definition of “depleted”

SEC. 101. REGIONAL FISHERY MANAGEMENT COUNCILS

Role of the Science and Statistical Committees

As a small matter, on the proposed additions to the scientific and statistical committee FMP(SSC) functions in Sec. 101(c)(B)(i) of the Bill, we would expect the SSCs of the Pacific and North Pacific Councils to flag the “goals and objectives of fishery ecosystem plans” as policy matters outside of their scientific purview. Both SSCs have actively reviewed the scientific portions of the fishery ecosystem plans at both Councils but will not go as far to recommend what goals and objectives should be. They would view that as a role for the Councils.

We would expect similar comments on Sec. 101(c)(B)(ii) and the control rule for forage fish. Only portions of the control rule would be viewed as scientific with aspects like “a minimum reference point to determine when a forage fishery should close” involving mostly policy decisions that the SSCs would not wish to make.

Sec. 101(d)(4) – Review of Allocation Decisions

We recognize the proposal in Sec. 101(d)(4) on the mandatory review of allocations as a priority for some stakeholders, including from our region. Allocation decisions can involve some of the most contentious issues taken up by the Councils and often have no clear solution. We have seen how these aspects can combine to create inertia for the status quo and unwillingness to revisit certain decisions to the frustration of some fisheries groups.

At the same time, we are concerned about the workload involved with an additional review requirement for the Councils. Some reviews can be very workload and time intensive and involve uncertainty about the required intensity of review. When litigation is possible, the level of review can be quite intensive and time consuming, most often disproportionately so.

On the question of a reasonable timeline for requiring a review, a pure 8 year requirement might be preferable to a default 5 year review with an option to delay the review for three additional one year periods. A 5-year review requirement would mean that the Councils would have 4 or fewer years of data with which to evaluate the effects of an allocation. Effective study might require more years of data. We are also concerned that three additional one-year delays could just create more workload for the Councils and NMFS to justify the extra time.

In our experience fishing businesses, both recreational and commercial, are not different than other businesses that hope for as stable a regulatory environment as possible to facilitate planning. Catch share programs in particular are meant to align the incentives of business with conservation. We would question if 5 years provides sufficient planning certainty in many cases.

In addition to the question of reasonable review timelines, we would emphasize that the nature of allocation decisions will vary by Council, by FMP, and even by stock within fishery management plans. Some FMPs like the Pacific Council’s Groundfish FMP have tens of stocks or stock complexes with set allocations, some established for minor administrative purposes. Congress might therefore consider limiting the review requirement by adding certain conditions as a trigger as an alternative to a blanket requirement. For example, the trigger could be a petition from the public with some minimum showing required to be put forward, or, a more formulaic approach tied to allocations being reached a certain number of times over some timeframe. Such criteria could address the concerns over the inertia for status quo allocations by removing the decision to review an allocation from the majority vote of a Council while also reducing the likelihood of causing the Councils to unnecessarily re-consider some allocation decisions.

Sec. 101(d)(5) – “Alternative fishery management measures” for recreational fisheries

Recreational fisheries have long been of high importance in the Pacific and North Pacific. We see sufficient flexibility in the MSA to address recreational fisheries and do not see this provision as granting authority that does not already exist. We may be misunderstanding the scope of the proposed change and would hope to see more deliberation or discussion on the underlying congressional intent before it was enacted.

SEC. 102. CONTENTS OF FISHERY MANAGEMENT PLANS.

We have questions about the connection of the proposed subsection (a)(15) to some of the proposals in Title II of the Bill, which we also discuss below. The proposed requirement to amend each FMP to comply with the proposed subsections (a)(15) and (e) seems potentially onerous, and again, potentially duplicative to the electronic monitoring and cost reduction reports proposed in Title II of the Bill.

We have some concerns about the language proposed for subsection (e) on integrated data collection, including the reference to “scientific data collection.” The meaning of that term can be ambiguous. Enforcement and catch accounting are sometimes not considered “scientific data” but are nonetheless very important aspects of fishery-dependent monitoring.

Also with that subsection, we would highlight potential confusion to the reference to National Standard 8. As we understand it, the reference may be unnecessary because all measures recommended by the Councils already need to be consistent with the requirements of National Standard 8. Referencing it in this provision might raise question about its applicability in other areas where it is not specifically called out. If subsection (e) were to be added, subsection (e)(2) would seem sufficient as a way of providing specific instruction on how National Standard 8 could be evaluated in the context of integrated data collection.

As discussed below, we believe the proposed (e)(1)(C)’s mandate to “give first consideration and priority” to electronic monitoring (EM) is premature given that EM programs are largely untested in U.S. fisheries. A requirement that explicitly required exploration of electronic monitoring as an option for fishery dependent monitoring would be preferable. Until EM tools are more established, we would question the appropriateness of placing the Councils in the position of having to prove that EM is inappropriate for each and every fishery. The focus would be more appropriately placed on evaluating options and identifying the option that is most cost-effective for the need.

On the proposed addition of subsection (d), which would add exceptions to the ACL requirements, we would raise some questions over (d)(1)(A)’s exception made for species where “all spawning and recruitment” occur in the waters of other nations or the High Seas. Removing spawners from the population, no matter where they eventually spawn, creates potential for overfishing. We do recognize the challenges of transboundary issues. Certain Pacific salmon stocks would be covered by this exemption yet are already subject to the international management exception to the ACL requirement.

On proposed (d)(1)(B), we do not understand the intended effect of the references made to National Standard 1 and the rebuilding provisions of Sec. 304(e). The ACL requirement has integrated well with National Standard 1 and rebuilding at the Pacific and North Pacific Councils. More on the congressional intent behind this provision would be helpful if it were to be enacted.

On the proposed subsection (d)(1)(C), we think this question was well settled by the National Standard Guidelines “in the fishery” framework and does not needed to be added to statute. If the provision is to be enacted, we would recommend adding overfishing risk as the main factor for determining whether ACLs are needed for non-target stocks. In our discussion of bycatch above, we noted Spiny Dogfish at the Pacific Council as being a non-target stock at potential risk of overfishing. As written, this provision of the Bill does not make clear what differentiates some non-target stocks from others as to the ACL requirement.

SEC. 103. FISHERY ECOSYSTEM PLANNING AUTHORITY.

We have been leading supporters of the fishery ecosystem plans and related activities produced at the Pacific and North Pacific Councils. We might characterize the Bill’s proposal as providing a blueprint for a “Cadillac” ecosystem plan. Some of the proposed “required provisions” would not likely be achievable in the short-term and would have to be built towards over time. We would therefore not wish to see plans not taken up because the full requirements could not be met. We also question the purpose of creating mandatory elements of a plan when the plans would be discretionary, as well as the very need for establishing discretionary authority when certain Councils have already established ecosystem plans. At a minimum, we would be concerned by invalidation of the plans that have already been produced.

At the Pacific Council we have been highlighting the connection between the analytical requirements of the National Environmental Policy Act (NEPA) and many of the elements discussed as part of fishery ecosystem plans and ecosystem based fisheries management. For example, we would point to the commonalities between the Bill’s proposed Sec. 303B(b)(1)(F) and the elements of a NEPA environmental impact statement. We see a potential for tying fishery ecosystem plans to the Councils’ proposals for a streamlined NEPA process. We are of the opinion that much of the time and resources directed toward NEPA analysis do not advance knowledge of the Councils or the public and would be better directed at advancing ecosystem based fisheries analyses.

Without such a tie to NEPA, we do not see the need for Secretarial approval of fishery ecosystem plans. NMFS scientists will be heavily involved in the development of fishery ecosystem plans,

and much of the substance of the plans are scientific in nature and most appropriately reviewed and approved through the SSCs and related peer review processes.

SEC. 104. ACTION BY THE SECRETARY

On Sec. 104(a) of the Bill, we agree that the 2006 amendments on integration of the National Environmental Policy Act and the MSA have not been adequately addressed. We see duplication in process and a tendency to favor form over substance in NEPA environmental impact statements and assessments. While quantity and form have been overemphasized at times, we do not wish to see the quality of NEPA environmental review diminished at the Councils. As discussed above in our comments on Sec. 103 of the Bill, we would highlight the potential to align the substance of NEPA analysis with the intent behind the fishery ecosystem plan provisions. There is considerable overlap between the aspirations for environmental analysis of ecosystem based fisheries management and NEPA.

On Sec. 104(b), as noted above, we do not see the need for Secretarial review of fishery ecosystem plans if they are mostly scientific in nature and discretionary.

Lastly, on Sec. 104(c), we would simply note that the term “sector” has different meanings in the Pacific and North Pacific than in New England. We understand the New England sectors to be very similar to what we would refer to co-ops or harvesting cooperatives.

(d) REBUILDING OVERFISHED AND DEPLETED FISHERIES

Rebuilding is an area where we agree that additional, limited flexibility, or at least more clarity in congressional intent, would be beneficial. In general, we see incorporation of the mean generation time based standard proposed in Sec. 104(d) as beneficial. However, we would be concerned about the “widely accepted among fish population biologists” determination. For one thing, it is unclear by what process such a determination would be made. The SSCs at each Council can make the determination of whether the mean generation time standard should apply.

We also think the determination would be unnecessary. We understand the mean generation time based approach to be based in conservation and fisheries science. It has never been in question at the Councils we are involved with from the scientific point of view. And the generation time is a commonly used “yardstick” in conservation science to account for differences in life spans and productivity.

We also wish to emphasize that the problems with rebuilding at the Pacific Council have come from the courts and the ambiguity in Sec. 304(e)(4)(i)’s “as short as possible” mandate as

qualified by the “needs of fishing communities.” Our best guess is that Congress was under the impression that most stocks could rebuild within 5 years at the time the Sustainable Fisheries Act was passed meaning that 10 years was twice as long as the shortest time to rebuild, as described in a 2005 op-ed article in the journal *Science*. We believe “the needs of fishing communities” to have originally been intended to involve consideration very similar to that established by National Standard 1 and National Standard 8. That is, we envision the original intent was to require rebuilding over a definite timeline but to allow flexibility to minimize the adverse impacts to fishing communities where needed.

The courts have interpreted the the meaning of the “needs of fishing communities” in different light. It is our view that they have done so without a solid appreciation for the scientific foundations of rebuilding. The Pacific Council still operates under considerable legal uncertainty because of continued ambiguity of the “needs of the fishing communities.” Some have argued that the “needs of fishing communities” requires proof that communities must face disastrous consequences or something similarly severe in order to justify harvest during rebuilding. We have questioned the “disastrous consequences” interpretation as out-of-step with the best available science and imbalanced in the context of what rebuilding is intended to achieve.

In summary, we see cause for a thorough reconsideration of the MSA’s rebuilding framework. A National Academies report and other scientific publications have questioned some of the core assumptions that were held about rebuilding at the time the 1996 amendments were passed. Broader reforms of the MSA’s rebuilding framework are warranted, yet we do not know if Congress has been able to give sufficient consideration to all the new information that has come to light since the 1996 Sustainable Fisheries Act amendments on rebuilding.

Lastly, we see the Bill’s proposed use of “depleted” in addition to “overfished” as having some benefit for public understanding by differentiating fishing from other causes of low abundance. However, we do not see much practical effect on the administration of the statute. While acknowledging the possible benefits, we see very few stocks where the effects of environmental factors and fishing as causes of stock decline can be definitively separated. For example, Pacific sardine is experiencing a decline that is likely environmentally driven. Yet fishing is also a contributing factor. The important conservation questions will remain focused on how much fishing to allow when the stock reaches lower abundance. And with rebuilding, the questions will focus on how much lowered fishing pressure could contribute to rebuilding of the stock. Like with a blue crab species in the North Pacific, the answer may be that reduced fishing will have no effect on rebuilding.

SEC. 105. OTHER REQUIREMENTS AND AUTHORITY.

On the Bill’s Sec. 105(c) regarding consumer information regarding sustainably caught fish, we have concern about the resources it would take for NMFS to administer the program and the potential for core science and monitoring resources to be redirected toward funding the program. Moreover, a lot of resources have been directed toward existing certification programs and we do not have a good understanding of how the Bill’s proposal would affect those. We have heard from some stakeholders that a government sponsored certification program may just be an additional requirement from fish buyers instead of a replacement for certification by independent organizations. In addition, we are uncertain about how aquaculture is proposed to be included. If it is intended to be included, then we would characterize it as a shift in policy that we have not had opportunity to sufficiently consider.

SEC. 112. STUDY OF ALLOCATIONS IN MIXED-USE FISHERIES

If such a report were to be requested, we would recommend that it consider the importance of regional differences.

TITLE II—FISHERY INFORMATION, RESEARCH, AND DEVELOPMENT

SEC. 201. ELECTRONIC MONITORING.

We are supportive of efforts at the Pacific and North Pacific Councils to evaluate electronic monitoring technologies. We see EM as having promise yet also recognize that there is a very limited track record of its use in U.S. fisheries especially for the purpose of enforcing and accounting for discarded fish. The cost of observer coverage in some fisheries, like the Pacific Council’s individual fishing quota program, has indeed become concerning for some participants. We are interested in moving EM forward yet think it should be done in deliberate, cautious manner that ensures that current monitoring and enforcement capabilities are maintained or improved.

The Bill’s proposed requirement to produce a report within 180 days of enactment seems a bit ambitious, not just in its timeline, but in the information it requests as well. The Pacific and North Pacific Councils are likely farther long in their consideration of EM than other regions and yet certain information requested in the Bill, like how much EM “can decrease costs,” is still largely unknown.

Likewise, the 1 year plus 180 days for the “regional electronic monitoring adoption plans” seems equally ambitious and potentially onerous. The 4 years for implementation may be reasonable for some fisheries yet, again, the mandate may be premature for many others. We would prefer

evaluating the appropriateness of EM in a flexible manner as is being done at the Pacific and North Pacific Councils.

SEC. 202. COST REDUCTION REPORT.

We are concerned about the work involved with this potential requirement and the potential duplication with proposals in Title 1 of the Bill on fishery dependent monitoring. However, if a review and report are to be required, the approach described in this section would be preferable to one focused only on EM. We view EM as a promising tool for monitoring and enforcement but just one of many potential tools, and again, a tool that is largely untested. It would be better to consider the relative cost effectiveness and maturity of EM within the context of monitoring and enforcement programs as a whole. We also question how this report may be redundant or complementary to the proposed addition of subsection (15) to Sec. 102.

SEC. 204. FISHERIES RESEARCH

Stock assessments are the foundation of sound fisheries management. While we do not have major issues with the substance of the proposed definition—it appears accurate at a very general level—we question whether a statutory definition of stock assessment is necessary. In practice, there are a spectrum of stock assessment techniques that can be used depending on the types and quality of data available. We do not see what purpose the definition would serve and without a clear benefit, we would recommend leaving it out.

As for the proposed stock assessment plan, we are worried about a draw on current resources. It also seems to address a problem we do not have at the Pacific or North Pacific Councils. We are happy with the state of planning at the Pacific and North Pacific Councils and the dialogue that occurs between the NMFS Science Centers and the Councils. With limited stock assessment resources, choosing the schedule for stock assessment will involve setting priorities. We see this as best done Council by Council, FMP by FMP, and in a risk-based manner. We would not want to see resources directed away from higher risk stocks because of a formalistic need to assess all stocks. Again using the Pacific Council’s Groundfish FMP as an example, there are over 90 stocks in the FMP with only a third of them having been assessed with formal stock assessments. Most of the unassessed stocks have been evaluated with risk-based techniques like the productivity-susceptibility method and have been judged to be at low risk of overfishing.

Given that the current system is working and the questionable additional benefits of adding this planning requirement to the statute, we would be concerned about its inclusion. The requirement could be improved by adding flexibility for risk-based approaches like done at the Pacific and North Pacific Councils.

SEC. 205. IMPROVING SCIENCE

We would raise some concerns about the guidelines called for by this section of the Bill. For one, it seems to be addressing issues we do not have in the Pacific or North Pacific. The Councils’ SSCs and related peer review activities are the appropriate forums for evaluating and determining the best available science. Determinations of the validity of observations and the inferences that can be made from them will depend on the particulars and guidelines can only be useful a high, general level. We do agree that valuable information can come from fishermen and other non-governmental sources. Yet such research efforts are best planned ahead of time and on a case by case basis. While we do acknowledge that there are general principles that the proposed guidelines could identify, and SSCs could be encouraged to be encompassing as practicable with the types of information they evaluate, we do not see anything proposed in this Section that cannot happen already at the Councils. We are therefore skeptical that the proposed guidelines would be worth the time and effort. Again, we see the determination of the best available science happening on a case-by-case basis where general guidelines will only be of limited value.

SEC. 206. SOUTH ATLANTIC RED SNAPPER COOPERATIVE RESEARCH PROGRAM.

This proposed section of the Bill does not directly affect the Pacific or North Pacific Councils. However, we have some concern with the precedent it might set given the specificity with which the Bill addresses a research program. We may just be unfamiliar with the background. Yet if such a program were to be proposed for the Pacific or North Pacific, we think it would be best to design the program in close coordination with the relevant, Council, the Science Centers, and other industry partners.

TITLE III—REAUTHORIZATION OF OTHER FISHERY STATUTES

SEC. 301. ANADROMOUS FISH CONSERVATION ACT and

SEC. 302. INTERJURISDICTIONAL FISHERIES ACT OF 1986

We support reauthorization of these two Acts. They provide for good state-federal cooperation for conservation and management and we would like to see more funding appropriated for them.

Enclosure - Washington Department of Fish and Wildlife – Initial Comments on “Discussion Draft” proposal on the “Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2104”

SEC. 306. STATE AUTHORITY FOR DUNGENESS CRAB FISHERY MANAGEMENT

As discussed above, the repeal of the sunset clause on this authority is our highest priority item.

TITLE IV—INTERNATIONAL

OTHER ISSUES WITH SEC. 202

We have thought that additional funding to support travel by domestic advisors would benefit the North Pacific Anadromous Fish Commission as well as the Bering Sea Fishery Advisory Body. Without such support, the input of our advisors is limited.

ADDENDUM TO STAFF SUMMARY OF FEDERAL LEGISLATION

HR 4742 (House MSA Reauthorization Bill)

The following amendments were made at the House Committee on Natural Resources on May 29, 2014 but were not incorporated into Agenda Item C.3, Attachment 3, the annotated version of the MSA:

- Garcia 041 would allow NMFS/Council to take into account the impact of foreign activities on an annual catch limit in the case of a transboundary stock, even with no agreement in place. The spiny lobster fishery was used as an example.
- Southerland 030 prohibits counting confiscated fish against the total allowable catch for red snapper, and does not affect the Pacific Council.

S 2379: Klamath Water Recovery and Economic Restoration Act of 2014

This bill, introduced on May 21 by Ron Wyden and Jeff Merkley (D-OR), and cosponsored by Barbara Boxer and Dianne Feinstein (D-CA), would formalize the Upper Klamath Basin Comprehensive Agreement, which was signed in April of this year. Under the agreement, users above Upper Klamath Lake agree to reduce their water consumption, allowing an extra 30,000 acre-feet to flow into the lake. In exchange, the Klamath Tribes agree to not pre-emptively exercise their senior water rights above the lake, and local landowners commit to helping restore plant and fish habitats in riparian areas. Downstream irrigators and ranchers, who have lesser claims to the water, stand to gain more certainty of access to water, particularly in dry years.

A fact sheet provided by the bill's sponsors says the bill sets out a cooperative water management plan to protect fish and wildlife and provide more predictable water amounts for farmers and ranchers, allowing irrigated agriculture to sustainably continue in the above Upper Klamath Lake and within the Klamath Reclamation Project. In low water years, the bill outlines a drought plan to provide additional tools to collaborate efforts. According to the fact sheet, the bill will increase in-stream flows and lake levels, permanently protect and enhance riparian areas, restore hundreds of miles of fish habitat, and provide additional water for National Wildlife Refuges that are critical to the health of the Pacific Flyway. It will boost the annual production of adult Chinook salmon by about 80 percent, according to fish biologists; and will modernize the management of the Klamath Reclamation Project to include fish, wildlife, and National Wildlife Refuges as authorized purposes for the first time.

The bill would authorize the Klamath Basin Restoration Agreement and Klamath Hydroelectric Settlement Agreement, allowing them to be fully implemented by the Federal government, and allowing the Secretary of the Interior to determine whether removing the four lower Klamath dams will advance the restoration of salmon fisheries and be in the public interest. (The Klamath Basin Restoration Agreement relates to issues including water allocation and management, restoration and commercial agriculture on the basin's National Wildlife Refuges, and the Klamath Hydroelectric Settlement Agreement relates to further study of the removal of the lower Klamath dams).

Critics say the deal doesn't reduce water demand enough to solve the problem and warn that it could lead to salmon die-offs.

H.R. 4692: Coastal Communities Ocean Acidification Act of 2014

This bill, introduced on May 20 by Chellie Pingree (D-ME), directs the Secretary of Commerce, acting through NOAA, to conduct coastal community vulnerability assessments related to ocean acidification. It amends the Federal Ocean Acidification Research And Monitoring Act of 2009 to allow stakeholders, scientists, and non-Federal resource managers to identify research and management needs related to ocean acidification and its impacts. It also would identify coastal communities that are most dependent on coastal and ocean resources that may be impacted by ocean acidification; assess their vulnerabilities; identify ocean acidification impacts that might harm those communities; identify key knowledge gaps; and promote collaboration with Federal and non-Federal experts. The bill would lead to recommendations for research that should be conducted, including in the social sciences and economics, to address the key knowledge gaps identified in the community vulnerability assessment report.

Regional Fishery Management Council Coordination Committee



June 20, 2014



The Honorable Mark Begich
United States Senate
111 Russell Senate Office Building
Washington, D.C. 20510-0201

The Honorable Doc Hastings
United States House of Representatives
1203 Longworth House Office Building
Washington, D.C. 20515-4704



Dear Senator Begich and Representative Hastings:

On behalf of the Council Coordination Committee (CCC), I offer the following comments on the reauthorization of the Magnuson-Stevens Act (MSA). These comments were developed during the CCC's most recent meeting on May 12-15, 2014. In preparation for this meeting, three working groups were established to develop draft positions on a range of issues relevant to MSA reauthorization. The CCC reviewed the reports from each working group and developed consensus positions on a wide range of topics being considered as part of the revised Act.



Although our discussions were informed by the draft legislation available at the time, most of our comments are general in nature and do not include recommendations for specific legislative language. Due to both time limitations and differences in perspectives, we did not develop consensus positions on all of the topics that are being considered as part of MSA reauthorization. The following sections summarize the CCC's consensus positions on a number of high-priority topics.



Management Flexibility

Rebuilding Plans

In general, the CCC supports the addition of measures that would increase flexibility with respect to stock rebuilding for certain types of fisheries. We acknowledge that rebuilding often comes with necessary and unavoidable social and economic consequences, but we believe that targeted changes to the law would enable the development of rebuilding plans that more effectively address the biological imperative to rebuild overfished while mitigating the social and economic impacts more effectively.

We agree that exceptions to rebuilding requirements should be limited in scope and carefully defined. Ideally, such exceptions would be codified in the MSA along with guidance regarding applicable circumstances in National Standard guidelines.

Management of Mixed Stocks

Some of the Act's more prescriptive management requirements pose particular challenges for the management of mixed stock fisheries and may be incompatible with ecosystem approaches. While the current National Standard guidelines allow for a mixed-stock exception to the "overfished" definition, the statutory basis for this is unclear and would benefit from clarification in the reauthorized Act.



Transboundary Stocks

The CCC supports the addition of language that would allow the Councils to develop annual and in-season quota trading programs for transboundary stocks. Also, enhancement of enforcement capabilities for international fisheries, including at-sea and in-port monitoring and enforcement would likely be useful. Assistance to developing countries in their enforcement capacity could also have substantial benefits.

Data Poor Fisheries

The CCC supports further consideration of exemptions, or alternatives to, the existing ACL requirements for data-poor species. The ad hoc methods used to establish ACLs for data-poor species often result in quotas that are less predictable, resulting in a loss of stability and yield in some of our most important fisheries. While ACLs and AMs have been effective management tools for some fisheries, they may not be the best tools for managing incidental or small-scale, data-poor fisheries. In these situations, Councils should have discretion to determine alternative control mechanisms for data-poor stocks.

Definition of "Overfished"

The CCC agrees that an alternative term could be useful for describing fisheries that are depleted as a result of non-fishing factors, unknown reasons, or a combination of fishing and other factors. The current MSY-based definition can be problematic when applied to data-poor fisheries or mixed-stock complexes. Furthermore, the term "overfished" can unfairly implicate fishermen for depleted conditions resulting from pollution, coastal development, offshore activities, natural ecosystem fluctuations, and other factors. Not all of the Councils agree that "depleted" is an appropriate term to replace "overfished" with. Some have noted that "depleted" has specific meanings in a number of other statutes, including the Endangered Species Act and the Marine Mammal Protection Act, and that care should be taken to avoid conflict or ambiguity if a change in terminology is implemented.

Transparency

The CCC supports a transparent public process, including webcasts and recordings of all Council and SSC meetings, to the extent practicable. However, budget problems are very real, and written transcripts are costly. Video recordings of large meetings may not add substantive content as they will not capture presentations and motions, which are the most critical visual aspects of meetings. Streaming video may also degrade the quality of webcast audio. While the technology for webcasts is rapidly evolving, live broadcasts generally require strong internet connections to be effective. In the context of Council meetings, which are often held in remote locations near fishing ports, the Councils have little ability to predict or control the quality of the internet connection.

We recommend that Congress require each Council to develop a policy in its Standard Operating Procedures that describes how it makes each type of Council meeting accessible to the public, and that Congress require the use of webcasts "to the extent practicable."

Collection and Use of Fishery Data

In general, the CCC believes that Councils should be granted a reasonable degree of flexibility in the development and implementation of monitoring programs (electronic and otherwise) so that those programs may be tailored appropriately for each fishery.

Electronic Monitoring

The Act should encourage development of electronic monitoring technologies and should enable the full utilization of such technologies in U.S. fisheries. However, introducing additional national-level regulations to govern the use of electronic monitoring beyond the current constraints of the Act (e.g., the

National Standards) may be counterproductive due to a number of factors, including funding and resource constraints, variability among fisheries, and the rapid evolution of technology. If such requirements are added to the Act, the CCC recommends that they only apply to new electronic monitoring programs (as opposed to programs currently in place or under development). Additionally, the CCC agrees that the Act should not preclude information collected with electronic monitoring technologies from being used for the purposes of fishery law enforcement. Such measures should be carefully considered in the context of individual fishery management plans.

Data Confidentiality

Our ability to manage fisheries effectively depends on having access to timely and accurate data. The CCC agrees that any changes to the Act should not limit Councils' abilities to use aggregated fishery-dependent data (landings data, observer data, etc.) for decision-making purposes. To this end, we also agree that contractors and grant recipients conducting work for either the federal government or Councils should have access to confidential data necessary for that work, provided that they sign data confidentiality agreements.

Marine Spatial Planning

The CCC agrees that the Act should not place new restrictions on the use of fishery data for the purposes of marine spatial planning. Without identifying important fishing grounds and practices, the fishing industry has more to lose than they would ever gain by not having fisheries data available to guide spatial planning efforts. The data could be particularly useful when coupled with habitat classification using remote sensing technologies.

Recreational Fisheries

Data quality and availability continue to be among the greatest challenges for the management of recreational fisheries. Given the importance of accountability, effective monitoring is critical for the successful management of recreational fisheries. While NOAA's Marine Recreational Information Program (MRIP) has provided some improved statistical methodologies to reduce sampling bias, the program has only been partially implemented, and it has done little to increase the precision of catch estimates. Addressing this problem will require increased sampling rates, which can only occur with increased funding.

Ecosystems

Ecosystem Approaches to Fisheries Management

In general, the CCC supports the addition of language that addresses ecosystem-level management objectives. At times, the Councils' efforts to shift from single-species management to ecosystem-based fisheries management (EBFM) have been constrained by the Act's emphasis on ending overfishing and rebuilding individual stocks of fish. We recommend that any EBFM-related changes in the Act provide general, rather than prescriptive, guidance and that such changes acknowledge the ongoing efforts within the scientific and management communities to inform and support the application of EBFM principles.

Ecosystem Science

The lack of scientific data about marine ecosystems is another significant barrier to the implementation of ecosystem-based management approaches. Many aspects of single-species stock dynamics are still poorly understood, and additional resources are needed for research in the rapidly-progressing area of ecosystem based fishery management. If the reauthorized Act includes EBFM mandates, the CCC recommends that specific measures be included to address these information gaps through funding or research mandates.

Forage Fisheries

The Act should encourage managers to take the role of forage fish into consideration, to the extent practicable, when establishing quotas and other management measures. The current language regarding Optimum Yield considerations already provides the Councils with authority to address forage concerns. Greater specificity is unlikely to be appropriate given the rapid evolution of ecosystem science and the high degree of uncertainty that remains regarding interactions among species. Several Councils have placed moratoria on the development of new fisheries on forage stocks, and while the Act does not preclude Councils from placing these types of moratoria, providing explicit authority to the Councils on this matter would be useful for future consideration of forage issues.

Catch Share Programs

The CCC agrees that Councils should maintain the maximum flexibility possible to develop effective management tools, including catch share programs. Adding excessive requirements for conducting a referendum is likely to increase the administrative burden for the Councils and may reduce the Councils' ability to implement new catch share measures.

NEPA Compliance

The CCC agrees that the alignment between the MSA and NEPA could be improved by incorporating many of the NEPA requirements directly into the MSA through reauthorization. In the setting of the regional fishery management council process, the rules, guidelines, and directives associated with the National Environmental Policy Act (NEPA) have caused delays and introduced duplication with the requirements of the MSA and other applicable laws. Ensuring NEPA compliance for marine fishery management actions has been costly and time-consuming for Council and NMFS staff and has limited the Councils' abilities to pursue other regulatory activities. In addition, the CCC notes that there have been instances where compliance with NEPA has hindered adequate compliance with MSA in terms of providing comprehensive analysis to Councils prior to their taking final action. Although the 2007 MSA reauthorization attempted to align the requirements of the two laws more closely through the addition of Section 304(i), the CCC does not believe what has been called for in the Act has been accomplished.

Without formal position on all specifics at this time, the CCC is finalizing a White Paper that recommends integrating the policy objectives and key requirements of NEPA directly into the MSA. This recommendation proposes that the MSA be amended by adding a section to the end of Section 303, Contents of Fishery Management Plans. This new section would incorporate the key parts of NEPA, which requires Federal agencies to prepare “a detailed statement” on “the environmental impact of the proposed action” into the MSA. It is important to emphasize that the objective is not to “get out of” complying with the intent of NEPA but rather to incorporate the important aspects of NEPA directly into the MSA. This change would enable a substantially more efficient fishery management process while ensuring that the objectives of NEPA are fully met.

Other Federal Statutes

The CCC recommends an amendment to the MSA that ensures all federal fishery regulations to be promulgated under the Council process established under MSA section 302. Specifically, the CCC proposes the addition of a section similar to section 5 of the House Committee discussion draft (H.R. 4742, May 23, 2014). This section would include a single provision that addresses all major statutes that affect fishery management and to ensure that any fishery restrictions necessary to implement other federal laws are developed under the transparent Council process established under MSA section 302 and consistent with requirements and procedures established under MSA sections 303 and 304.

Thank you for the opportunity to provide these comments on MSA reauthorization. Please don't hesitate to contact me if you have any questions or would like clarification on any of the comments above. We appreciate your continued interest in the perspectives of the regional fishery management councils, and we look forward to future involvement in the MSA reauthorization process.

Sincerely,

A handwritten signature in black ink, appearing to read "R B Robins, Jr.", with a stylized flourish at the end.

Richard B. Robins, Jr.
Chairman

Cc: CCC Members
Mr. Dave Whaley
Mr. Bob King
Mr. Jeff Lewis
Ms. Eileen Sobeck
Mr. Samuel Rauch

**DRAFT LEGISLATIVE COMMITTEE REPORT ON MAGNUSON-STEVENSON ACT
REAUTHORIZATION PRIORITIES AND OTHER LEGISLATIVE MATTERS**

NOTE: This is a very preliminary draft of Legislative Committee discussions on Thursday, June 19, provided at this time for the purpose of promoting discussion by other Council advisory bodies. The LC report is expected to be finalized by Tuesday, June 24.

The Legislative Committee (LC) met via webinar on Wednesday, June 11, and in person on Thursday, June 19. The webinar was attended by committee members Dr. David Hanson, Mr. David Crabbe, Ms. Dorothy Lowman, and Mr. Dan Wolford; Council Executive Director Dr. Donald McIsaac, and Pacific Council staff Ms. Jennifer Gilden. Several other people attended.¹ During the webinar the LC discussed H.R. 4742 (Strengthening Fishing Communities and Increasing Flexibility in Fisheries Management Act), the House (Magnuson-Stevens Act) MSA reauthorization bill; and the Senate's discussion draft of an MSA reauthorization bill. The LC tasked the Council staff with drafting a preliminary LC statement that included points to be made in a joint letter to House and Senate principals, for review at the LC meeting June 19 in conjunction with the Council meeting in Garden Grove, California.

The meeting on June 19 was attended by Dr. David Hanson, Mr. David Crabbe, Ms. Dorothy Lowman, Mr. Dan Wolford, Mr. Buzz Brizendine, and Mr. Dale Myer; Council Executive Director Dr. Donald McIsaac; Pacific Council staff Ms. Jennifer Gilden; and Mr. Rod Moore, Mr. Corey Niles, Ms. Jessi Doerpinghaus. The LC recommends the Council make the following points and recommendations in the aforementioned letter.

HR 4742

1. Implications of language regarding intersection between the MSA and the Endangered Species Act needs to be clarified *and discussed further by the LC.*²
2. The LC recommends the Council support the section on Fishery Impact Statements as a solution to the current problems associated with National Environmental Policy Act (NEPA) implementation.³
3. While the LC does not recommend the Council object to overarching standards for the implementation of electronic monitoring programs, it believes there should be some exemption for programs that already exist or that are nearly ready to be implemented.⁴

¹ Susan Chambers (GAP), Miako Ushio (NOAA), Jamie Goen (NOAA), Jessi Doerpinghaus (WDFW), Peter Flournoy (International Law Offices of San Diego), Theresa Labriola (Wild Oceans), Tara Brock (Pew Charitable Trusts), Marci Yaremko (CDFW), Jennifer Quan (WDFW), Gway Kirchner (ODFW), Michele Culver (WDFW), John Cross (Pew Charitable Trusts), Yvonne deReynier (NMFS), Rod Moore (WSPA), Steve Bodnar (Coos Bay Trawlers Asso.), Corey Niles (NOAA), Troy Buell (ODFW), Bob King (Senate staff)

² Sec. 5 in MSA as revised by HR 4742; page 15 of annotated copy (Agenda Item C.3.a, Attachment 3)

³ Sec. 303(d) in MSA as revised (page 65 of annotated copy)

⁴ MSA as revised (page 152 of annotated copy)

4. The LC recommends that rebuilding times be clarified for those instances when a stock is exempted from a given rebuilding time because fishing isn't the cause of the stock's depletion, and/or fishing restrictions cannot correct the depleted condition.⁵
5. The LC supports the change in HR 4742 (as compared to the earlier discussion draft) that allows use of electronic monitoring for enforcement purposes.⁶
6. The LC supports the use of the asset forfeiture fund for us in the areas in which the fines were collected.⁷
7. The LC reaffirms its support for the REFI Act (HR 2646) and encourages Congress to pass this legislation expeditiously, whether or not it is part of the MSA reauthorization process.
8. The LC supports the amendment by Del. Madeleine Bordallo which allows the use of data for marine spatial planning in order to ensure access to fishing grounds and for national security purposes.⁸
9. The LC believes the cost recovery amendment by Rep. Paul Runyan, requiring the Secretary to publish the estimated cost of recovery from a fishery resource disaster with 30 days of the disaster determination, is impractical.⁹
10. State jurisdiction over Dungeness crab should be extended, as done in the Senate discussion draft.¹⁰

Senate Discussion Draft

1. The Senate discussion draft includes requirements for a great deal of new science and reporting that would require more staff and funding, and could decrease flexibility of individual Councils. For example...
2. The definition of "subsistence fisheries" needs to be made more specific; as it currently stands it may apply to recreational fishers who bring fish home for consumption.¹¹
3. The section on fishery ecosystem plans should be reconsidered. As currently written, the high standards included in that section could have a chilling effect on the development of Fishery Ecosystem Plans.¹²
4. The LC supports wording to streamline the NEPA/MSA process.¹³
5. The electronic monitoring section in the discussion draft contains an excessive amount of detail regarding requirements and timelines, and should be made more flexible.¹⁴

⁵ MSA Sec. 304(e)(4)(ii) as revised (page 81 of annotated copy)

⁶ MSA as revised (page 152-153 of annotated copy)

⁷ MSA Sec. 404(3) as revised (page 135 of annotated copy)

⁸ Sec. 402(b)(5) as revised and amended by Del. Bordallo (page 132).

⁹ Sec. 312(a)(1)(B) as revised and amended by Rep. Runyan (page 112)

¹⁰ Sec. 306(i), page 101.

¹¹ Sec. 3(42A), page 13.

¹² Sec. 303B, page 74-76.

¹³ Refers to Sec. 304(i) of the MSA; page 157 of annotated MSA; see also page 84

¹⁴ Page 158-159 of annotated MSA.

Other issues

1. It would be useful to clarify that Council discussion of international negotiations, such as those recently on the US-Canada Albacore Treaty, are eligible for discussion during closed sessions of Council meetings.
2. The LC recommends the Council highlight support for the Senate illegal, unreported, and unregulated (IUU) definition, including the importance of unreported catches, and why.¹⁵
3. Support for the Antigua Convention (reword).

Other Council priorities

These priorities are from previous Council and LC discussions, but were not discussed during the webinar. They are included for the purpose of further LC consideration:

- Expanding state enforcement authority to all vessels that fish directly offshore of the territorial sea within the state-given boundaries.
- Revising rebuilding plans should not be required consequent to minor changes in stock status (noise).
- Providing clarity to better allow Councils to consider the needs of fishing communities in developing rebuilding plans, above a “disaster” level.
- Exploring more flexibility for fishery impacts on data-poor species when the current precautionary approach becomes the bottleneck for healthy mixed-stock fisheries.
- Designating one Commissioner seat on Inter-American Tropical Tuna Commission for the Council.
- Providing flexibility in observer requirements.
- Enhancing enforcement capabilities for international fisheries, including at-sea and in-port monitoring and enforcement, and providing assistance to developing countries in their enforcement capacity.
- Amending MSA to change “vessels” to “vessel” in the IUU certification section.

Council Letter on the House Discussion Draft

The LC recommends the Council task the Executive Director with sending a letter to Representative Doc Hastings and Senator Mark Begich with recommendations on MSA reauthorization. While the comment period for the Senate Staff Discussion Draft closed June 2, 2014, and there are elements in the Senate Staff Discussion Draft that are not included in HR 4742, it is felt the principals in both houses of Congress should be aware of the Council perspective on these important matters as the legislative process on MSA reauthorization progresses.

¹⁵ Sec. 609(e), page 42-43 of annotated MSA.

Other Federal Legislation

The LC discussed S. 2094, the Vessel Incidental Discharge Act. While the Council has not been asked to comment on S. 2094, the LC is in unanimous support of Section 7(a), which provides for the current exemption for commercial fishing vessels (including recreational charter boats) to be made permanent. The LC recommends the Council endorse support for making this exemption permanent by any legislative vehicle possible, in the event that the Council is asked for comment after the June Council meeting.

The LC also discussed S. 2198 and H.R. 4039, which both deal with drought relief issues in California and southern Oregon. The LC is very concerned that these bills, and several associated companion bills, are dangerous to healthy salmon production. The LC endorses the points made in opposition to these bills as expressed in the letter from the Golden Gate Salmon Association (Agenda Item C.3.a, Attachment 9). The LC recommends the Council authorize the expression of opposition to drought relief bills that are deleterious to salmon populations, in the event that the Council is asked for comment after the June Council meeting.

The Council is on record for supporting the Revitalizing the Economy of Fisheries in the Pacific Act (S. 1275). The LC notes that similar refinancing relief has been proposed in an MSA reauthorization bill and a Coast Guard authorization bill. The LC recommends the Council endorse support for the refinancing provisions in S. 1275, if the Council is asked to comment on other related bills after the June Council meeting.

The LC also discussed the Senate Resolution honoring Billy Frank, Jr. and his many contributions to contemporary salmon recovery and management. The LC would like to draw the Council's attention to this resolution, which is included in full in Agenda Item C.3.a, Attachment 5, to acknowledge his contributions in the Pacific Council arena and elsewhere.

The Council also discussed recent reports in the media about the President's intent to take new actions to protect and preserve the ocean. This includes a large marine protected area in the South Pacific, and efforts to combat illegal fishing, address seafood fraud, and prevent illegally caught fish from entering the marketplace. It is expected that there will be an open comment period that will be a precursor to an executive order.

Future Meeting Planning

The LC plans to meet again in September.

PFCM
06/19/14

LEGISLATIVE COMMITTEE REPORT ON MAGNUSON-STEVENSON ACT REAUTHORIZATION PRIORITIES AND OTHER LEGISLATIVE MATTERS

The Legislative Committee (LC) met via webinar on Wednesday, June 11,¹ and in person on Thursday, June 19.² During the webinar, the LC discussed H.R. 4742 (Strengthening Fishing Communities and Increasing Flexibility in Fisheries Management Act), the House Magnuson-Stevens Act (MSA) reauthorization bill, and the Senate's discussion draft of an MSA reauthorization bill. At that time, the LC tasked Council staff with drafting a report with points to be made in a joint letter to House and Senate principals. This draft was circulated at the onset of this Council meeting to assist other advisory bodies in preparing their statements to the Council. During the June 19 meeting, the LC considered the draft report on MSA reauthorization before discussing other Federal legislation.

The LC recommends the following points and recommendations to the Council.

Council Letter on MSA Reauthorization Issues

The LC recommends the Council task the Executive Director with sending a letter to Representative Doc Hastings and Senator Mark Begich with recommendations on MSA reauthorization. While the comment period for the Senate Staff Discussion Draft closed June 2, 2014, and there are elements in the Senate Staff Discussion Draft that are not included in HR 4742, it is felt the principals in both houses of Congress should be aware of the Council perspective on these matters as the legislative process on MSA reauthorization progresses.

HR 4742

1. With regard to the section describing consistency under federal laws³, the LC recommends the Council express support for the language mandating that the MSA control when there is any conflict with the National Marine Sanctuaries Act or the Antiquities Act. Regarding language about the intersection between the MSA and the Endangered Species Act (ESA), the LC noted it is unclear whether the bill intends to have the Councils select the appropriate incidental catch rate for ESA-listed fish (such as some salmon stocks) caught under MSA authority, or whether current ESA processes

¹ The webinar was attended by committee members Dr. David Hanson, Mr. David Crabbe, Ms. Dorothy Lowman, and Mr. Dan Wolford; Council Executive Director Dr. Donald McIsaac, and Pacific Council staff Ms. Jennifer Gilden. Several other people attended: Susan Chambers (GAP), Miako Ushio (NOAA), Jamie Goen (NOAA), Jessi Doerpinghaus (WDFW), Peter Flournoy (International Law Offices of San Diego), Theresa Labriola (Wild Oceans), Tara Brock (Pew Charitable Trusts), Marci Yaremko (CDFW), Jennifer Quan (WDFW), Gway Kirchner (ODFW), Michele Culver (WDFW), John Cross (Pew Charitable Trusts), Yvonne deReynier (NMFS), Rod Moore (WSPA), Steve Bodnar (Coos Bay Trawlers Assoc.), Corey Niles (WDFW), and Troy Buell (ODFW).

² The June 19 meeting was attended by Dr. David Hanson, Mr. David Crabbe, Ms. Dorothy Lowman, Mr. Dan Wolford, Mr. Buzz Brizendine, and Mr. Dale Myer; Council Executive Director Dr. Donald McIsaac; Pacific Council staff Ms. Jennifer Gilden; and Mr. Rod Moore, Mr. Corey Niles, and Ms. Jessi Doerpinghaus.

³ Sec. 5 in MSA as revised by HR 4742; page 15 of annotated copy (Agenda Item C.3.a, Attachment 3)

would determine the incidental take rate, , and Councils would then adopt conforming regulations; Council staff has yet to be able to determine Congressional intent. The Council previously adopted a position on this matter advocates for an open and transparent process for the selection of ESA-related fishery impact rates with Council involvement, such as occurred in the case of Lower Columbia River Tule Fall Chinook. The LC recommends the Council support the section on Fishery Impact Statements as a solution to the current problems associated with National Environmental Policy Act implementation.⁴

2. While the LC does not recommend the Council object to overarching standards for the implementation of electronic monitoring programs, it believes there should be some exemption for programs that already exist or that are nearly ready to be implemented.⁵
3. The LC recommends that rebuilding time adjustments or exemptions include the category of instances when a rebuilding plan would otherwise be required, but is not either because fishing is not the cause of the stock's depletion, and/or because fishing restrictions cannot correct the depleted condition.⁶
4. The LC supports the change in HR 4742 (as compared to the earlier discussion draft) that allows use of electronic monitoring for enforcement purposes.⁷
5. The LC supports the use of the asset forfeiture fund for use in the areas in which the fines were collected.⁸
6. The LC reaffirms its support for the REFI Act (HR 2646), which has been incorporated into HR 4742, and encourages Congress to pass this legislation expeditiously, either as part of MSA reauthorization or separately.
7. The LC supports the newly-added language that allows the use of data for marine spatial planning in order to ensure access to fishing grounds and for national security purposes.⁹
8. The LC believes the newly-added language that requires the Secretary to publish the estimated cost of recovery from a fishery resource disaster with 30 days of the disaster determination is impractical.¹⁰
9. State jurisdiction over Dungeness crab should be extended, as done in the Senate discussion draft.¹¹

Senate Discussion Draft

1. The Senate discussion draft includes requirements for a great deal of new science and reporting that would require more staff and funding, and could decrease flexibility of individual Councils. For example, under Section 404(e), the draft would require stock assessments for every stock of fish that has not already been assessed, subject to appropriations; and under Section 303(a)(14), would require annual catch limits (ACLs) for forage fish fisheries to take into account “the feeding requirements of dependent fish

⁴ Sec. 303(d) in MSA as revised (page 65 of annotated copy)

⁵ MSA as revised (page 152 of annotated copy)

⁶ MSA Sec. 304(e)(4)(ii) as revised (page 81 of annotated copy)

⁷ MSA as revised (page 152-153 of annotated copy)

⁸ MSA Sec. 404(3) as revised (page 135 of annotated copy)

⁹ Sec. 402(b)(5) as revised and amended by Del. Bordallo (page 132).

¹⁰ Sec. 312(a)(1)(B) as revised and amended by Rep. Runyan (page 112)

¹¹ Sec. 306(i), page 101.

throughout [their] range.” A substantial amount of new science would be required for both of these provisions, given that the Pacific Council manages 119 stocks of fish.

2. The definition of “subsistence fisheries” needs to be made more specific. As it currently stands, it could apply to recreational fishers who bring fish home for consumption.¹²
3. The section on fishery ecosystem plans should be reconsidered. As currently written, the high standards included in that section could have a chilling effect on the development of Fishery Ecosystem Plans.¹³
4. The LC feels the wording to streamline the National Environmental Policy Act/MSA process is insufficient, and instead supports the solution in HR 4742.¹⁴
5. The electronic monitoring section in the discussion draft contains an excessive amount of detail regarding requirements and timelines, and should be made more flexible.¹⁵

The LC recommends the Council highlight support for the Senate illegal, unreported, and unregulated definition (including the importance of unreported catches), which contains elements critical to achieving a level playing field for U.S. fisheries in the international arena.

Other issues

The LC recognizes that proposed legislation addresses several Council priorities, but notes that there are several issues important to the Pacific Council that remain unaddressed by both the House and Senate and would like to see them incorporated into a bill reauthorizing the MSA. Relevant topics include not requiring revision of rebuilding plans when there are minor changes in stock status (the “noise vs. signal” issue), better allowing Councils to consider the needs of fishing communities in developing rebuilding plans, exploring flexibility for fishery impacts on data-poor species when the precautionary approach becomes a bottleneck for healthy mixed-stock fisheries, and several issues related to highly migratory species fisheries. The LC recommends the Council continue to draw attention to these concerns.

Highly migratory species issues include designating one Commissioner seat on Inter-American Tropical Tuna Commission for the Pacific Council; expanding state enforcement authority to all vessels that fish directly offshore of the territorial sea within the state-given boundaries; enhancing enforcement capabilities for international fisheries, including at-sea and in-port monitoring and enforcement, and providing assistance to developing countries in their enforcement capacity; changing “vessels” to “vessel” in the IUU certification section; and providing flexibility in observer requirements.

It would be useful to clarify in Section 302(i)(A)(3) that Council discussion of international negotiations, such as proposals and counter proposals in the recent the US-Canada Albacore Treaty negotiations, are clearly an eligible topic for discussion during closed sessions of Council meetings. It would also be useful to include a carryover exception to allow ACLs to be exceeded in order to carry over surplus and deficit harvest from one year to the next, provided the SSC finds that such a carryover will have negligible biological impacts, as well as clarifying current MSA language about the SSC recommending true biological overfishing limits (OFLs), and not policy decision-dependent annual catch limits related to social, economic, or risk factors.

¹² Sec. 3(42A), page 13.

¹³ Sec. 303B, page 74-76.

¹⁴ Refers to Sec. 304(i) of the MSA; page 157 of annotated MSA; see also page 84

¹⁵ Page 158-159 of annotated MSA.

Other Federal Legislation

The LC discussed S. 2094, the Vessel Incidental Discharge Act. While the Council has not been asked to comment on S. 2094, the LC is in unanimous support of Section 7(a), which provides for the current exemption for commercial fishing vessels (including recreational charterboats) to be made permanent. The LC recommends the Council support making this exemption permanent by any legislative vehicle possible, in the event the Council is asked for comment after the June Council meeting.

The LC also discussed S. 2198 and H.R. 4039, which both deal with drought relief issues in California and southern Oregon. The LC is very concerned that these bills, and several companion bills, are dangerous to healthy salmon production. The LC endorses the points made in opposition to these bills as expressed in the letter from the Golden Gate Salmon Association (Agenda Item C.3, Attachment 9). The LC recommends the Council authorize the expression of opposition to drought relief bills that are deleterious to salmon populations, in the event that the Council is asked for comment after the June Council meeting.

The Council is on record for supporting the Revitalizing the Economy of Fisheries in the Pacific Act (S. 1275). The LC notes that similar refinancing relief has been proposed in an MSA reauthorization bill and a Coast Guard authorization bill. The LC recommends the Council endorse support for the refinancing provisions in S. 1275, if the Council is asked to comment on other related bills after the June Council meeting.

The LC also discussed the Senate Resolution honoring Billy Frank, Jr. and his many contributions to contemporary salmon recovery and management. The LC would like to draw the Council's attention to this resolution, which is included in full in Agenda Item C.3.a, Attachment 5, to acknowledge his contributions in the Pacific Council arena and elsewhere.

Finally, the LC discussed recent reports in the media about the President's intent to take new actions to protect and preserve the ocean. This includes a large marine protected area in the South Pacific, and efforts to combat illegal fishing, address seafood fraud, and prevent illegally caught fish from entering the marketplace. It is expected that there will be an open comment period that will be a precursor to an Executive Order, and, if so, the LC can add this matter to a future agenda.

Future Meeting Planning

The LC recommends meeting at the onset of the September Council meeting in Spokane, and via webinar in advance if there are significant legislative developments over the course of the summer.

PPMC
06/25/14

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON LEGISLATIVE MATTERS

The Coastal Pelagic Species Advisory Subpanel (CPSAS) met jointly with the Coastal Pelagic Species Management Team (CPSMT), and received a briefing from Ms. Jennifer Gilden on the reauthorization of the Magnuson-Stevens Act (MSA) and other Federal legislation matters. We are providing comments on two of these items.

S 2094: VESSEL INCIDENTAL DISCHARGE ACT

The CPSAS strongly supports legislation that exempts commercial fishing vessels with regard to ballast water discharges and other discharges incidental to the normal operation of a vessel.

REAUTHORIZATION OF MAGNUSON-STEVENSONS ACT

The CPSAS had the opportunity to review Briefing Book materials, including Agenda Item C.3.a, Attachments 3 and 4. The CPSAS appreciates the extensive work that went into preparing for this agenda item, and thanks Council staff for the analyses and comparison of the Senate and House discussion drafts.

The CPSAS also considered comments submitted by Dr. Richard Parrish to Senate Commerce Subcommittee staff and comments from the California Wetfish Producers Association (Agenda Item C.3.d, Supplemental Public Comment 2); as well as a letter from the Marine Conservation Alliance (Agenda Item C.3.d, Supplemental Public Comment 3). The CPSAS supports many of the comments included in these letters and would like to highlight the following as key considerations.

Overall, the MSA has done a good job of conserving fisheries resources. Given the progress made on rebuilding stocks and the work currently underway in the Councils, the CPSAS believes significant changes to the MSA are not necessary at this time. It is important to recognize the precautionary fishery management policies now in effect, particularly the visionary management of CPS on the West Coast. The discussion drafts, especially the Senate version, create many new processes that may hinder progress already underway, or duplicate authority already provided by the MSA without adding measurable conservation value.

The CPSAS highlights the following issues of concern we believe need to be addressed and resolved in the MSA discussion drafts.

Definition of bycatch

Expansion of the definition of ‘bycatch’ in the Senate draft to include incidental catch, and any “non-targeted” fish, is problematic for CPS fisheries. CPS are fished as a complex and catches frequently include a mix of various CPS. These “incidental” catches of other CPS should not be termed “bycatch.” Virtually all of the species caught are marketed. The definition of ‘bycatch’ in HR 4742 is more reasonable as it simply encourages practical methods to avoid waste.

Depleted and depletion

The CPSAS appreciates the recognition that other forces, besides fishing, may cause natural stock declines. However, the use and definition of “depleted” and “depletion” in the reauthorization drafts will cause confusion and will require substantial clarification. The term “depletion” has an accepted scientific definition, meaning the population size (or other index of reproductive potential) as a proportion of the estimated average, or median long-term population size, with no fishing. Depletion is not directly associated with maximum sustainable yield.

Further, the term “depleted” in HR 4742, which replaces “overfished” throughout, would essentially change the definition of “overfished.” While the Senate draft maintains the existing definition of overfished as a level of fishing mortality that jeopardizes the capacity of a **fishery** to produce maximum sustainable yield (MSY), HR 4742 applies the new “depleted” term to **stocks** and **stock complexes**. The unintended consequence of this new definition, if approved, would be to downgrade many stocks to “depleted” status. At the very least, HR 4742 should mirror the definition of overfished currently found in regulations and clarify that “depleted” refers to mortality derived from sources other than fishing.

Forage Species

The CPSAS would like draw attention to the precautionary management framework the Pacific Council established for CPS, beginning more than a decade ago. The Council also has recently approved revisions to the list of authorized fisheries and fishing gear, and work is underway to protect unmanaged forage species. The Senate language regarding forage species does not accurately reflect U.S. fishery management of these species. Further, the definition of forage fish is problematic not only for CPS but many other fisheries as well. While we recognize the importance of, and need for an ecosystem-based approach to fishery management, there is no need to create additional provisions for these species. The MSA already provides ample authority to manage all fish stocks.

The CPSAS understands that MSA reauthorization is a lengthy process and there will be further modification to current language before the final legislation is approved. We would appreciate the Council’s consideration of these issues and look forward to providing more recommendations as the reauthorization process continues.

PFMC
06/24/14

GROUND FISH ADVISORY SUBPANEL REPORT ON LEGISLATIVE ISSUES

The Groundfish Advisory Subpanel (GAP) reviewed the [C.3.b, Draft Legislative Committee Report](#) and listened to a brief presentation by Mr. Rod Moore, who attended both the Legislative Committee (LC) webinar and the LC's meeting at this Council meeting.

Magnuson-Stevens Fishery Conservation and Management Act (MSA) Reauthorization

Regarding the House version of the bill, HR 4742, the GAP understands it has moved out of the House and requests for changes will not be helpful at this time. The GAP notes the House bill includes several of the GAP priorities that are noted below.

However, regarding the Senate version, the GAP understands the Senate Discussion Draft will be rewritten, so we reiterate the concerns from our November 2013 GAP statement ([Agenda Item I.2.b, Supplemental GAP Report](#)), which include (in no particular order):

- Revise the rebuilding time requirements and addressing social and economic issues by changing “possible” to “practicable;”
- Stocks later determined to have never been overfished should not be held to rebuilding provisions;
- Include a carryover exception to annual catch limits (ACLs);
- Explore more flexibility for data-poor stocks;
- Streamlining the National Environmental Policy Act (NEPA) and MSA section 204(i); and
- Provide flexibility in requirements for observers.

We hope the Senate version takes into account these concerns and *adds* one more:

- Include a viable mixed-stock exception. Though there is a vague reference to this in the National Standard 1 guidelines, the statute is not explicit in allowing an exception. The GAP suggests that if it is referenced and available to use, a clear allowance should be included in the MSA.

Other Legislative Issues

The GAP in general supports the Draft Legislative Committee Report on these items and offers the following comments:

S. 2094, Vessel Incidental Discharge Act

The GAP strongly supports the LC recommendations in Section 7(a), the continued exemption of commercial fishing vessels (including recreational charter vessels) from proposed Environmental Protection Agency (EPA) rules governing incidental vessel discharges.

S. 1275, the REFI Pacific Act

The GAP strongly supports the Legislative Committee recommendations regarding the REFI Pacific Act.

Both of the above bills are extremely important to the West Coast fishing industry.

Pacific Ocean Marine Monument

Finally, the GAP notes the LC's mention of President Obama's proposal to take executive action to expand existing Pacific Ocean Marine Monuments in the Pacific. The GAP does not support a blanket marine protected area (MPA) in the South Pacific. This is a very heavy handed approach to achieve conservation. Conservation through potential prohibition of access is not in the best interest of any fishing communities.

PFMC
06/24/14

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT ON LEGISLATIVE MATTERS

Because the Highly Migratory Species Advisory Subpanel (HMSAS) understands that the draft report of the Legislative Committee on the draft amendments to the Magnuson-Stevens Act (MSA) Reauthorization Bill will not be final until after the HMSAS adjourns on June 21, 2014, the HMSAS has commented on Agenda Item C.3.a, Attachment 4, June 2014. The HMSAS would like to focus on the two pending bills (HR 4742 and S. Discussion Draft BEGICH) as they are compared in Council document “Agenda Item C.3.a, Attachment 4, June 2014.”

1. Rebuilding Time Lines: The Senate version states that rebuilding time lines shall be as short as possible; however, the HMSAS favors much more flexible approach as set out in the House version.
2. Electronic Monitoring: Neither House and Senate versions set forth a minimum for the size of a vessel before it can be required to carry VMS and this should be included. The HMSAS suggests only vessels greater than 24 meters in length should be required to carry VMS.
3. Electronic Monitoring: The Senate version makes provisions for the Councils to review fishery management plans (FMPs) to determine where electronic monitoring can be used instead of human observers and the HMSAS favors this provision.
4. Data Poor Species: The House and Senate versions combined seem to provide that Councils shall identify data-poor fisheries and prioritize them for the U.S. Secretary of Commerce, who will then develop a plan to conduct stock assessments as soon as possible. The HMSAS favors giving this provision emphasis.
5. Enforcement Penalties: Section 404(e) of the House version provides that a portion of penalty monies collected be used for data poor fisheries and cooperative research, and the HMSAS strongly favors this provision. The Senate version indicates such monies should be used to increase enforcement and also would raise the maximum penalty from \$100,000 to \$180,000 and the HMSAS strongly opposes such provisions.
6. Other Changes:
 1. The Senate version calls for the Council Scientific and Statistical Committees to develop guidelines for the greater use of data from non-governmental sources, including fishermen, fishing communities, universities, and research institutions so that some of this data could be used as the best scientific information available and the HMSAS favors this provision.
 2. The Senate version provides authority for the Councils to use alternative fisheries management measures in recreational fisheries. The HMSAS favors this.
 3. The House version requires Federal-state partnerships to develop best practices for implementing recreational fishery data collection programs and create a grant program to improve these programs, as well as requiring the National Research Council to study recreational data survey methods. The HMSAS favors this.

7. Referendum Before Imposition of Catch Share Programs: The House version would amend the MSA Section 303A Limited Access Privilege Programs, section (c)(6)(D) to provide for a referendum before the Secretary can approve or implement a catch share program coming from certain Councils. The HMSAS strongly recommends that such a provision include the Pacific Council. Some Council members may believe that the Council has already decided against such referendums; however, that was only in the context of the trawl rationalization program.

Finally, the HMSAS would like to thank the Pacific Council staff for their tremendous job in preparing the Legislative Committee briefing documents and taking the time to brief the HMSAS.

PFMC
06/22/14



June 13, 2014

Ms. Dorothy Lowman, Chair
Pacific Fishery Management Council
70 NE Ambassador Place, Suite 101
Portland, OR 97220

Re: Agenda Item C.3 – Legislative Matters

Dear Chair Lowman and Council Members:

Last month, we submitted the attached comments on the Senate draft "Magnuson-Stevens Reauthorization Act of 2014" to Senators Begich and Rubio as well as oceans subcommittee staff.

As you know, a lot is at stake in the upcoming renewal of the Magnuson-Stevens Fishery Conservation and Management Act. Since 2000, 34 stocks of fish have recovered to sustainable levels since 2000. As NOAA points out, "When stocks are rebuilt, they provide more economic opportunities for commercial, recreational, and subsistence fishing."

Wild Oceans strongly urged Congress to renew the law in ways that will keep the nation on the path toward 100% sustainable fisheries while keeping fishermen fishing, and to not make changes that could have unintended and disastrous consequences, such as creating loopholes in or broad-brush exceptions to anti-overfishing requirements that would set the nation back a decade or two. We do not want to do that, and we don't need to.

We did make several recommendations, however, including improvements in forage fish management. Specifically, we urged the authors to add language specifying that the minimum biomass threshold for forage fish populations shall be set above the biomass level that produces the maximum sustainable yield (MSY), and that the target population should be substantially higher to prevent ecosystem overfishing.

Sincerely,



Ken Hinman
President



Theresa Labriola
West Coast Fisheries Project Director



May 21, 2014

The Honorable Mark Begich, Chairman

and

The Honorable Marco Rubio, Ranking Member

Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard

United States Senate

Washington, DC 20510

RE: Magnuson-Stevens Act Discussion Draft

Dear Senators,

I am submitting the following comments on behalf of *Wild Oceans*, an independent non-profit group of fishermen founded in 1973¹ and dedicated to an ecosystems approach to conserving salt water fish. Our programs emphasize conserving the ocean's top predators – the billfish, tunas, swordfish and sharks – while preserving healthy ocean food webs and critical habitats essential to the survival of all fish, marine mammals, sea turtles and seabirds.

A lot is at stake during the upcoming renewal of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as highlighted by a pair of reports released last month by the United States Department of Commerce. The *2013 Annual Report on the Status of U.S. Fisheries* shows the advances that NOAA Fisheries, the regional fishery management councils, and cooperating stakeholders have made toward ending overfishing and rebuilding fish stocks, with a total now of 34 stocks of fish recovered to sustainable levels since 2000.

As NOAA points out, "When stocks are rebuilt, they provide more economic opportunities for commercial, recreational, and subsistence fishing." The other report, *Fisheries Economics of the United States 2012*, shows a 7% gain in the value of the nation's commercial and recreational fisheries since 2011, with a 3% growth in fishing-related jobs.

¹ As the National Coalition for Marine Conservation, or NCMC.

Wild Oceans strongly urges Congress to renew the law in ways that will keep the nation on the path toward 100% sustainable fisheries while keeping fishermen fishing, and to not make changes that could have unintended and disastrous consequences, such as creating loopholes in or broad-brush exceptions to anti-overfishing requirements that would set the nation back a decade or two. We do not want to do that, and we don't need to.

At the same time, we believe there are portions of the Act that should be amended and/or strengthened to ensure the future of fishing in this country and the protection of the marine ecosystems that sustain all fishing. Therefore, we commend the leadership of the Subcommittee on Oceans, Atmosphere, Fisheries, and Coast Guard for preparing a thoughtful first-draft of amendments ("Magnuson-Stevens Reauthorization Act of 2014"). Many of the issues that stakeholders want to see discussed and considered during the upcoming reauthorization are included in this draft. Our comments on the proposed amendments follow.

Findings, Purposes and Policy

We support changes to the *Findings* section of the MSA, amending §2(a)(2) to declare that a number of natural and human-caused effects on ecosystems diminish fisheries, including bycatch mortality and trophic impacts that have changed ecosystem communities. We caution, however, that this finding should motivate Congress to restore ecosystem health wherever possible in order to enhance the productivity of our fisheries, and not be used as an excuse to lower expectations.

We support amending §2(a)(6) to add that a national program is necessary to protect marine ecosystems as well as essential fish habitats; and, amending §2(a)(11) to say that councils "are demonstrating" significant progress in ecosystem management, to replace the current language, "have demonstrated," in order to emphasize that much work is still to be done in this regard.

We also support new *Findings*, §2(a)(16), highlighting the negative effects of bycatch on sustainable fisheries and healthy ecosystems; §2(a)(11), highlighting the importance and vulnerability of forage species; and, §2(a)(4), stressing the value of subsistence fishing to communities and the nation.

We support changes to the *Purposes* section, adding §2(b)(5) to provide for the adoption of ecosystem goals and policies.

We support changes to the *Policy* section, amending §2(c)(3) regarding bycatch to emphasize that avoiding bycatch, and minimizing mortality of bycatch that can't be avoided, are priority objectives, not merely minimizing discards or unnecessary waste.

Definitions

We support amending the definition of “bycatch” (§3(2)) so that it is not limited to economic and regulatory discards, but recognizes that target fish that are not landed and non-target fish that are retained qualify as bycatch, too.

We support adding a new definition of “forage fish” (§3 (18A)). The definition as proposed is fine, however, we suggest changing the term to “forage species” in recognition of the fact that not all of the species that fit this definition are true fish, e.g., krill and squid.

On the other hand, we find the new definitions of “non-target” (§3(30A)) and “target” (§3(42B)) confusing. The definition of “target” includes fish that are defined as “bycatch” (economic discards) and the definition of “non-target” includes fish that are defined as “target” (fish that may be retained for personal use).

Rebuilding Fisheries

One of the most serious challenges facing Congress in this reauthorization is balancing calls to give fishery managers more time to restore already overfished stocks, with the paramount need to maintain the substantial progress we’ve made in creating sustainable fisheries, progress that is directly attributable to strict mandates added to the law in past reauthorizations.

An amendment to §304(e)(4)(A)(ii) proposes to change the maximum allowable rebuilding time for overfished fisheries, to the amount of time it would take without fishing plus one mean generation time, unless the science is not available to make this determination, in which case it would be no longer than 10 years.

During the last reauthorization (2006), NOAA Fisheries testified that the standard practice is for the Regional Fishery Management Councils to use the maximum allowable rebuilding timeframe, and we’ve no reason to believe that’s changed. This amendment would allow rebuilding for some fisheries to take longer than under current law. For example, a fishery that can be rebuilt with no fishing in 7 years must, under current law, be rebuilt in no more than 10. Under the new formula, if that fish has a generation time of 6 years, the fishery will get a 13-year rebuilding plan.

Many species are exempted from that deadline anyway, for biological reasons. Moreover, the proposed formula could conceivably shorten rebuilding timelines for some species. Without an analysis of how it would alter rebuilding schedules for the 40 species currently designated overfished and the object of rebuilding plans, it is impossible to make an informed assessment of the impact. Congress should request that NOAA Fisheries provide such an analysis before considering such an amendment to the Act.

Improvements in Forage Species Management

The addition of strong new language in the *Findings* section highlights the ecological importance of forage fish, but the proposed required provisions under fishery management plans for forage species are inadequate.

An amendment to §302(g)(1)(B) would include among the functions of a council's Scientific and Statistical Committee (SSC) that of developing ABC (allowable catch) control rules for forage fisheries to account for their importance to "managed fish," and setting a minimum reference point or threshold of forage to leave in the water. While we support the intent of this amendment (although the importance of forage species goes far beyond "managed fish"), we do not support this approach, because it leaves forage fish policy decisions in the hands of the SSC - policy decisions they are not equipped to make - and therefore it is unlikely to move the councils beyond the *status quo* in forage fish conservation and management. The role of the SSC is to provide this technical advice (e.g., reference points) in order to meet forage fish conservation goals established by the councils or, preferably, the MSA itself.

Likewise, a proposed amendment to the Required Provisions of FMPs (§303(a)(14)) does not give forage species the additional conservation protection they need. This provision would task the SSC with determining predator feeding needs in setting ACLs and reference points for forage fish. Again, this approach will not work. Asking the councils' science advisors to determine predator needs in establishing population targets and fishing limits requires extremely complex multi-species models and an incredible amount of (unavailable) data, with uncertain results. In the end, the councils' fishery managers will still have to make an allocation of forage between the fisheries and predators in the ecosystem.

We recommend that Congress insert a specific forage fish policy into the Required Provisions section, in accordance with the best available scientific advice on reference points for forage fish (see attached *Wild Oceans* briefing paper, *Ecological Reference Points for Forage Species*). We urge you to add language specifying that the minimum biomass threshold for forage fish populations (i.e., cutoff, at which point fishing ceases) shall be set above the biomass level that produces the maximum sustainable yield (MSY), and that the target population should be substantially higher to prevent ecosystem overfishing.²

Discretionary Fishery Ecosystem Planning Authority

The Senate draft proposes in §303(B)(a) that Fishery Ecosystem Plans (FEPs) would be discretionary. If a council or the Secretary chooses to develop an FEP, it is

² Proposed definition of "ecosystem overfishing" - *fishing a species or stock of fish at a rate or level that jeopardizes the function, stability and productivity of the community or ecosystem of which it is a part.*

then required to include a number of provisions (description of the ecosystem, indicators of ecosystem health, impacts on the ecosystem, goals and objectives, etc.), all of which are good. FEPs that pre-date passage of the Act, however, would not be subject to these requirements. By our calculation, that exemption would cover existing plans implemented by the Pacific, North Pacific, South Atlantic and Western Pacific Councils, some of which are legitimate FEPs, but others are ecosystem plans in name only.

We recommend that Congress amend the MSA to require FEPs for each region, and apply the required provisions to all FEPs, no matter when they were adopted. The discretionary and inconsistent approach to ecosystem planning proposed in the Senate draft does not resolve the problems it is meant to address, namely the “lack of agreement as to what ecosystem-based management is” or “the question of how to incorporate ecosystem-based management properly into fishery management,” since councils would not be required to do ecosystem planning nor would they be subject to the same standards for doing it.

MSA “Sustainably Caught” Labeling Authority

The program proposed in §305(k) would allow all federally-managed fish that are not overfished and subject to overfishing, and even those that are the object of a rebuilding plan, to be labeled “Sustainably Caught.” Labeling requirements as to the origin of the fish, i.e., what, where-from, how -caught, and by whom, would be required of fish carrying this label, but not those that don’t carry this label.

We do not believe this federal seafood certification system is a good idea, for a number of reasons. First of all, the bar for certification, using the baseline standards of the MSA, is set way too low, leaving out vital consideration of bycatch problems and ecosystem impacts. The standards for fish caught under international agreements, which would be eligible as well, are notoriously lower. Such a “sustainably caught” label could have the unintended effect of suggesting that further fisheries management is unnecessary for certified species. Finally, it is one thing for a private entity to rate fisheries or seafood products, but something else when the government gets into the business. The notion of the Administration essentially judging and certifying its own performance is counterintuitive.

However, we do support the proposed labeling requirements in §305(k)(3) – which would aid consumers in making informed decisions - but urge Congress to consider requiring this information on all fish and fish products sold in the United States.

North Pacific Fisheries Conservation

We urge Congress to amend §313 of the MSA so that parts (a)(b)(c)(d) & (e), which currently apply only to the North Pacific Council, apply to other regional councils.

This section establishes a system of fees by which the fishing industry is required to contribute to observer costs. It also establishes a Fishery Observer Fund within the Treasury into which fees are deposited and withdrawn only for the purposes of supporting this section of the Act.

One example of why this section should be extended to other regions is Atlantic river herring and shad, seriously depleted species taken as bycatch in fisheries in New England and the mid-Atlantic region. Observer coverage rates are far below the levels needed to accurately track bycatch caps implemented by the New England and Mid-Atlantic Councils. NOAA Fisheries rejected observer requirements on the grounds that it lacks the funding to provide the needed levels of coverage and, moreover, the councils do not have the authority to specify coverage levels in FMPs. Councils need to be able to specify observer coverage levels that are necessary for carrying out management and conservation plans that they develop. Applying this section to other regions would give all councils the authority and resources they need to do their jobs.

On other miscellaneous issues, we support allowing the use of alternative management measures for recreational fisheries (§302(h)(9)) and improving transparency by requiring webcasts of council meetings (§302(i)(2)(G)), preferably in real-time as several councils do already at minimal cost.

Thank you for considering our views. We look forward to working with you and Subcommittee staff to address these and other issues during Congressional reauthorization of the Magnuson-Stevens Act.

Sincerely,

A handwritten signature in blue ink that reads "Ken Hinman". The signature is fluid and cursive, with the first name "Ken" and last name "Hinman" clearly distinguishable.

Ken Hinman
President

ECOLOGICAL REFERENCE POINTS FOR FORAGE SPECIES¹



The biological benchmarks, or reference points, used by fishery managers to judge the relative health of a fish population are, in the simplest terms, targets that we aim for and thresholds we aim to avoid. The conventional reference points applied to most single-species assessments, however, do not allow us to gauge the population's capacity to provide adequate prey for other species in the ecosystem. That's why, for forage species, we need "ecological reference points," the development of which is a priority in the Atlantic States Marine Fisheries Commission's Strategic Plan for 2014-18.ⁱ

It is essential to begin with the understanding that a) ecological reference points will be grounded in policy, balancing social, economic and ecological goals; and b) the process of developing and applying reference points to meet broader, ecosystem-based management goals is not so different from the process used to establish standard biological benchmarks.

The lack of clearly defined management objectives is a major impediment to establishing reference points of any kindⁱⁱ. Typically, there are two kinds of reference points, conceptual and technical, in that order.ⁱⁱⁱ *Conceptual* reference points first define the management goals, such as maximizing yields to fisheries (MSY) or incorporating other societal values into an optimum yield (OY). Then *technical* reference points are developed for achieving these goals, e.g., F_{MSY} or $\%F_{MSY}$.

In the conceptual stage, ecological reference points, in the case of important forage species, must articulate a goal of providing a forage set-aside for other species in the ecosystem, in order that technical reference points may be developed to achieve this ecologically sustainable yield (ESY)^{iv}.

Ecological target and threshold (or limit) reference points can make use of the traditional benchmarks, such as some measure of population size (abundance-based) and fishing mortality rate (mortality-based), applied to a single-species stock assessment for the forage species in question. That's because the goal of leaving a specified portion of the prey population in the water to serve predator needs can be defined in the same currency as leaving a reserve (e.g., $\%B_{MSY}$) to guard against stock depletion.

So, how is this forage set-aside determined?

¹ Portions of this briefing paper are excerpted from **RESOURCE SHARING: The Berkeley Criterion**, by Ken Hinman, President, Wild Oceans. 2014.

At this point, it's worth noting that innovative ecosystem models are being developed with the aim of quantifying the functional relationships between predators and prey.^v Such models may eventually help fishery managers better understand the trade-offs among concurrent management strategies for multiple species. However, the most complex and precise ecosystem model will not, in and of itself, reveal what amount of fishing for a key forage species should be allowed or what amount to leave in the water. That is ultimately an allocation of prey between human and natural predators, a policy decision based on agreed-upon ecosystem goals.

As noted, these goals (conceptual reference points) are essential to establishing target and threshold reference points for assessing the ecological status of a forage species. But fishery managers, accustomed to looking to their stock assessment scientists to provide model-based reference points for already-established MSY-based management goals, sometimes seem at a loss as to where to begin.

Fortunately, considerable effort has been devoted over the past two decades to finding a practicable approach to establishing ecological reference points for forage species. In fact, a remarkable consensus has emerged in the scientific literature around just what those targets and limits should be, based on the ecological importance of forage species, the impacts of fishing on predator-prey relationships, and the precautionary principle. In this paper, we review what is becoming an accepted standard for conserving and managing forage species.

Managing for Higher Abundance

For forage species, population size – or standing biomass - constitutes the principal measure of the amount of prey available to meet the needs of dependent predators. Although other factors such as age structure of the population and geographic distribution are important to determining adequate availability of prey, this is a reasonable place to begin.

Reference points that would be responsive to the role of a species as forage would be ones which maximize population abundance, taking into regard the allocation of fish between natural mortality and fishing mortality.^{vi} First consideration, then, should be given to how targets and limits for population abundance and fishing mortality might be established in a manner that specifies an allocation of the species as prey.^{vii}

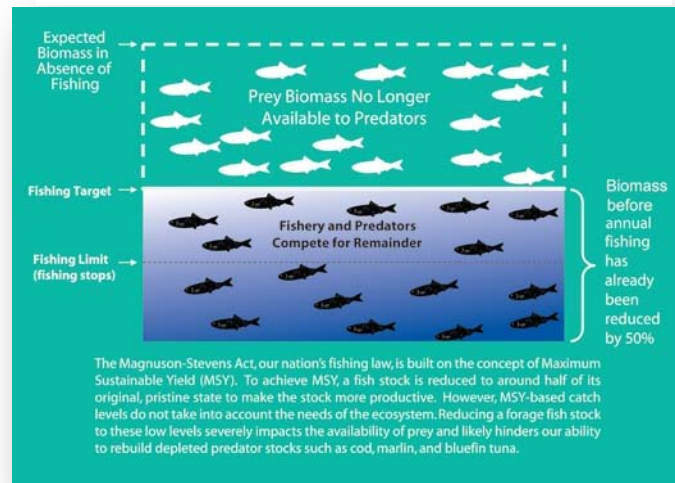
The National Marine Fisheries Service (NMFS) in 2009 revised its federal guidelines for implementing annual catch limits consistent with the Magnuson-Stevens Fishery Conservation and Management Act's National Standard 1 (NS1). NS 1 states that "Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery..." The optimum yield is the amount of catch that provides the greatest long-term benefit to society. It was conceived as a modifier to MSY, requiring fishery managers to consider a range of

factors in setting management goals, including the effects of fishing on marine ecosystems.^{viii} But NMFS had never provided guidance and direction as to how fishery managers should take into account the protection of marine ecosystems when they set catch limits, or how MSY should be reduced by ecological factors, or even what those factors are. The predictable result is that ecological factors have rarely if ever been taken into account.

Under **the revised NS1 Guidelines**, NMFS now recommends setting a population target for forage species higher than the level associated with MSY “in order to maintain adequate forage for all components of the ecosystem”.^{ix} The stock size at MSY (B_{MSY}) is on average approximately 40% of the unfished stock size, according to

NMFS (citing scientific literature showing the range between 36.8% and 50% of a pristine population.)^x Indeed, taking a more precautionary approach with regard to forage species abundance is well established in the scientific literature.^{xi} NMFS does not recommend how much above B_{MSY} forage species abundance should be, but a number of other science and management institutions do.

PREY DEPLETION ASSOCIATED WITH MSY



An Emerging Consensus

The **Convention on the Conservation of Antarctic Marine Living Resources** (CCAMLR) is generally credited as the first regional body to apply an ecosystems approach to fisheries management. Recognizing the key role of krill (*Euphausia superba*) as forage in the ecosystem, CCAMLR in 1991 adopted more conservative reference points than commonly used in traditional fisheries management.^{xii} The requirements of krill predators (whales, fish, seals, penguins, et al) were incorporated by establishing a level of krill escapement of 75% of the pre-exploitation (un-fished) biomass, instead of the 40-50% level normally used in single-species management.^{xiii}

The Antarctic Krill policy, sometimes called the ‘predator criterion’, is consistent with the fact that low trophic level forage species, or prey species with high predation rates, are less resilient to intensive fishing mortality than higher trophic levels and thus merit more precaution. It establishes the optimum population level for krill as somewhere between the MSY biomass and carrying capacity, acknowledging that choosing a point within this range is a subjective decision (as we’ve discussed). The choice of a target

population level of 75% of the un-fished population is essentially splitting the difference between a population at or near MSY, which fails to take predator needs into account, and maintaining the population at carrying capacity, which gives complete protection for predators but allows for no fishing.^{xiv}

The **United Nations Food & Agriculture Organization, in its Technical Guidelines for Responsible Fisheries** published in 2003, suggests “maintaining selected prey populations above 75% of the un-fished biomass to allow for predator feeding.”^{xv} In fact, the “75% solution” is becoming the accepted standard for setting best practices for managing forage fish, a default target population level for forage species in the absence of detailed and explicit ecosystem analysis that identifies a more specific level.^{xvi}

In 2011, the **Marine Stewardship Council**, which develops international standards for sustainable fishing, convened a Low Trophic Level Task Force to develop guidelines for assessing the sustainability of forage fisheries in order to award the MSC label. Its recommendations were released in 2011.^{xvii} The new guidelines apply to key low trophic level species, such as menhaden, herrings and sardines (family *Clupeidae*), anchovies (family *Engraulidae*), krill (family *Euphausiidae*) and other small pelagic species that form dense schools, feed mostly on planktons, and transmit a large volume of energy to higher trophic levels by serving as prey.

The MSC suggests that the default recommended target reference point for these forage species is 75% of an un-fished population. After

The “75% solution” is emerging as the consensus standard within the international scientific community.

reviewing research the council funded to determine the amount of precaution necessary for forage species,^{xviii} MSC concluded that “(s)etting a target of 75% of un-fished biomass for LTL [low trophic level] species (25% depletion) reduces the impact on other species within the ecosystem by more than half while maintaining yields above 80% of the level that would be achieved with a target of 40% of un-fished biomass. Such a target is usually achieved at fishing mortality rates less than half those needed to achieve MSY.”

Weighing in with its own study and report in 2012, the **Lenfest Forage Fish Task Force**, 13 ecologists representing 5 countries, suggests a “precautionary biomass target” for forage fish of $1.5 B_{MSY}$ (the biomass associated with achieving MSY), which happens to correspond to 75% of unexploited biomass.^{xix} Clearly, a consensus is emerging within the scientific and policy-making communities.

Preventing Ecosystem Overfishing

The corollary to maintaining a higher target population for key forage species is setting a higher “overfished” threshold. The standard single-species definition of an overfished stock – the point at which fishing is curtailed and rebuilding begins – is approximately $\frac{1}{2} B_{MSY}$, a population level that may still be capable of rebuilding, but which is about $\frac{1}{4}$ or less of an un-fished population. It is clearly risk-prone to permit a forage population to be reduced to this level without significantly diminishing the ecosystem’s capacity to support healthy and abundant populations of predator species.^{xx}

Using food web models, the Lenfest Task Force^{xxi} compared conventional MSY strategies - used to prevent overfishing of most forage fisheries within the United States - to more precautionary approaches and found that “the only fishing strategies that reliably prevented a decline in dependent predators were those that limited fishing to half the conventional rate.” Ecological sustainability is further improved by doubling the minimum biomass that is left in the ocean, from the conventional minimum to 40% of the un-fished biomass; that is, making B_{MSY} the limit reference point.

The information available to fishery managers is an important consideration in determining the magnitude of precaution to apply. Halving fishing rates and doubling minimum biomass from conventional levels may be sufficient when managers know enough about forage fish interactions with predators and the environment to assess the impacts of fishing. However, in data-poor situations, the Lenfest Task Force recommends maintaining a biomass floor of at least 80% of an un-fished level for existing fisheries, while prohibiting new forage fisheries from developing until information improves.

To summarize, then, target populations should be set no lower than 75% of un-fished biomass, while the overfished threshold should be set substantially higher than traditional levels, certainly no lower than the biomass level associated with MSY.

Allocating Mortality

The **NOAA Chesapeake Bay Office**, in *Fisheries Ecosystem Planning for Chesapeake Bay*, recommends that fishery managers “(c)onsider explicitly strong linkages between predators and prey in allocating fishery resources. Be precautionary by determining the needs of predators before allocating forage species to fisheries.”^{xxii} Allocating forage fish to serve ecosystem needs *first* suggests controlling total mortality by specifically allocating it between predators and fishing.

For instance, Collie and Gislason, in examining the use of single-species reference points in a multi-species or ecosystem context, conclude that such reference points are inappropriate for forage species which have natural mortality rates that fluctuate substantially. They suggest a more appropriate alternative for forage fish is to manage

for total mortality by decreasing fishing mortality when natural mortality increases.^{xxiii}
Or, Z (total mortality) – M (natural mortality) = F (fishing mortality).

One type of mortality-based reference point already in use to approximate fishing at the MSY level for data poor stocks, or when there is a high degree of uncertainty about stock status, is $F=M$ or where F is a fraction of M , e.g., $F=0.75M$.^{xxiv} It is commonly assumed that when harvesting at MSY, F is roughly equal to M , so this is an F_{MSY} proxy. If the goal is to maintain a higher biomass, as in the case of forage species, then the allowable fishing mortality rate would be set no higher and preferably lower than M .^{xxv} The **North Pacific Fishery Management Council**, which uses a tiered system for setting buffers between overfishing limits and target catch levels based on stock life history and uncertainties in the assessment, establishes an overfishing level (MSY) for walleye pollock (*Theragra chalcogramma*), an important forage fish in Alaskan waters, that is equal to M and a target F that is set at $0.75M$.^{xxvi}

Managing for Availability

Ecological management of forage fish may also account for the fact that setting a more conservative target population goal does not fully protect the species' role in the ecosystem. Fishing a prey population also affects the size (age) of prey available and distribution throughout their natural range.^{xxvii} Indeed, the two are often linked, since different age classes exhibit different patterns of movement. Because spatial and temporal availability of prey of the right size is important to predators finding an adequate supply of food where and when they need it, precautionary catch limits alone cannot prevent localized effects on the ecosystem.^{xxviii}

The **Policy on Fisheries for Forage Species of Canada's Department of Fisheries and Oceans** states: "Management plans for commercial fisheries on forage species should include explicit provisions to ensure that fisheries do not unduly concentrate harvest and do not produce local depletions of the forage species...Forage species should be managed in ways which ensure local depletion of population components does not occur. Local depletion of the forage species could result in food shortage for the dependent predators, even if the overall harvest of the forage species was sustainable."^{xxix}

To avoid localized shortages and maintain prey availability, management strategies for forage fish may establish, in addition to biomass and mortality targets and thresholds: 1) The desirable population age structure, i.e., an age distribution reflecting that of a natural, pre-exploitation population; and, 2) Population density, i.e., prey availability distributed in time and space approximating the un-fished range to avoid local or regional depletions.^{xxx}

Summary

The first principle of conserving forage species should be to adequately meet the needs of the ecosystem, that is, natural predators, before determining the allocation of fish to fishing. Fish populations do have limits and thresholds that cannot be exceeded without causing harm at the ecosystem or community level.^{xxxi} For important prey or forage species, the scientific and fishery management communities are arriving at a consensus as to what these limits should be, and equally important, on what the target population should be for forage species.

The scientific literature and emerging standards in fishery policy suggest the populations of forage species should be maintained at a level approximating 75% of the un-fished population and that fishing mortality should never exceed but should preferably be significantly lower than natural mortality.

Reference Point ²	Target	Limit
Biomass (population size)	B_{MAX75%}	B_{MSY}
Fishing Mortality	F_{=.75M}	F=M

In the end, raising our standards for conserving important forage species means changing our management goal from maximizing yields to fisheries to sharing the resource, in a way that recognizes the vital ecological role of these species as prey while still providing for reasonable fishing opportunities. The concept of resource sharing is based on the best available science, it is ecologically sustainable, and it is fair to all marine predators, including humans.



*This briefing paper was prepared by **Wild Oceans**, an independent non-profit group of anglers dedicated to protecting the ocean's top predators – the billfish, tunas, swordfish, and sharks – while preserving healthy ocean food webs and critical habitats essential to the survival of all fish, marine mammals, sea turtles and seabirds. For more information visit WildOceans.org or call (703) 777-0037.*

Endnotes

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² B is the stock biomass, B_{MAX} is the biomass in the absence of fishing, B_{MAX75%} is 75 percent of the un-fished biomass, and B_{MSY} is the biomass associated with producing the maximum sustainable yield.

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June 20, 2014

Ms. Dorothy Lowman, Chair
And Members of the Pacific Fishery Management Council
7700 NE Ambassador Place #200
Portland OR 97220-1384

RE: Agenda Item C.3.d. – Summary Comments on Magnuson-Stevens Act (MSA) Reauthorization Legislation

Dear Ms. Lowman and Council members,

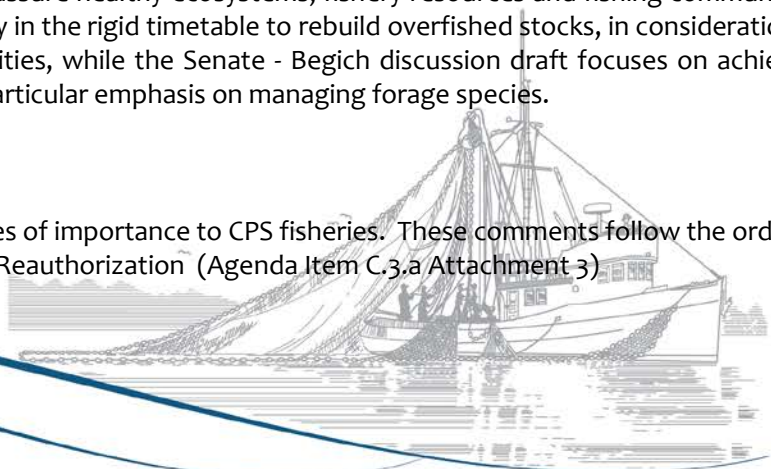
The California Wetfish Producers Association (CWPA) represents the majority of coastal pelagic species (CPS) 'wetfish' fishermen and processors in California. I have reviewed the extensive Council briefing materials on this subject, including Agenda Items C.3.a Attachments 3 and 4 in the June Briefing Book, PFMC staff comparison of HR 4742 and the Senate Discussion Draft. On behalf of California's wetfish industry, we would appreciate your consideration of our concerns, as well as supplemental comments submitted independently by Dr. Richard Parrish.

To begin, it is important to recognize the precautionary nature of fishery management policy under the current MSA, as well as the visionary management of coastal pelagic species on the west coast, implemented more than a decade ago. For example, the Pacific sardine harvest control rule pioneered efforts to incorporate ecosystem considerations into fishery management. Harvest guidelines for all CPS leave 75 percent or more of the estimated biomass in the ocean for other marine life. By and large, the MSA as written is working well to conserve the nation's marine resources. However, the MSA mandate to achieve optimum yield also means conserving the nation's fishing communities.

It appears that the House and Senate discussion drafts, while attempting to address comments made during the Managing Our Nations Fisheries Conference (MONF), have approached MSA reauthorization from opposite ends of the same goal: to prevent overfishing and to assure healthy ecosystems, fishery resources and fishing communities. HR 4742 addresses the need for more flexibility in the rigid timetable to rebuild overfished stocks, in consideration of the socio-economic needs of fishing communities, while the Senate - Begich discussion draft focuses on achieving ecosystem-based fishery management, with particular emphasis on managing forage species.

As always, the devil is in the details.

Following are summary comments on key issues of importance to CPS fisheries. These comments follow the order of the Working Draft PFMC staff analysis of MSA Reauthorization (Agenda Item C.3.a Attachment 3)



Representing California's Historic Fishery

Section 2(a) Findings – Begich Discussion Draft

[Senate New – (11)] This statement does not recognize the precautionary management of CPS on the west coast, nor does it accurately reflect U.S. fishery management generally. There may be “few constraints on the rapid development of new fisheries...” in international waters, but such development is precluded in the U.S. We agree with many other commenters who recommend deleting explicit discussion of forage in MSA reauthorization. Singling out poorly defined “forage” species for special treatment is unnecessary.

Section 2(b) Purposes – Begich Discussion Draft

[Senate New (5)] Provides for adoption of ecosystem-based fishery management goals and policies. However, the prescriptive structure is problematic. Current ecosystem models are not yet advanced enough to model the dynamic fluctuations of CPS. Ecosystem modelers acknowledge that these models are not intended to be used to set harvest limits. The PFMC is already addressing ecosystem-based management (EBM). Councils should maintain the flexibility to address EBM on a regional level.

Section 2(c) Policies – Begich Discussion Draft

[Senate (4)] Expands the definition of bycatch – encourages methods to avoid bycatch, which is problematic for CPS (see definitions)

Section 3(2) Definitions – Begich Discussion Draft

[Senate (2)] Expansion of the definition of ‘bycatch’ to include incidental catch, any “non-targeted” fish, is problematic for CPS. CPS are fished as a complex, and catches frequently include mixed CPS in substantial amounts, virtually all of which are desired and marketed. These “incidental” CPS catches should not be termed “bycatch”. The definition of ‘bycatch’ in HR 4742 simply encourages practical methods to avoid waste.

Concerns with the definition of ‘depleted’ and ‘depletion’ included in both HR 4742 and the Senate – Begich discussion draft. In an attempt to address concerns expressed at MONF regarding the use of the term “overfished” in situations where stocks decline due to natural cycles, not fishing, both House and Senate discussion drafts adopted the term “depleted”. The House version replaces “overfished” with “depleted” throughout, while the Senate version incorporates “otherwise depleted” as an add-on wherever “overfished” appears. We appreciate the recognition that other forces besides fishing may cause natural stock declines, but the use of the word “depleted” without further explicit definition could result in serious unintended consequences – including lawsuits.

The current definition of ‘overfished’ in regulation: 104-297 (34) *“The terms “overfishing” and “overfished” mean a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce the maximum sustainable yield on a continuing basis...”*

The Senate discussion draft defines “depleted” parallel to the existing regulatory definition of overfished, and inserts “or otherwise depleted” wherever “overfished” appears in statute.

However, HR 4742 substitutes “depleted” for “overfished” throughout, but changes the definition significantly: *“The term ‘depleted’ means, with respect to a stock of fish or stock complex, that the stock or stock complex has a biomass that has declined below a level that jeopardizes the capacity of the stock or stock complex to produce maximum sustainable yield ...*

At the very least, HR 4742 should clarify that “depleted” refers to declines not attributed to fishing and the definition should mirror the current definition of overfished, i.e. jeopardizes the capacity of a fishery to produce [MSY]...

As Dr. Parrish pointed out in his comments, the word “depletion” has an accepted scientific definition that is not associated with MSY at all, but rather, the population size with no fishing:

“The term ‘depletion’ means with respect to a stock of fish that the population size (or other index of the stock’s reproductive potential) is a proportion of the estimated average or median long-term population size with no fishing.”

Please review the discussion in Dr. Richard Parrish's comments relating to the use of the term 'depleted'. The bottom line: if the term "depleted" remains in the MSA, this term needs explicit clarification to ensure it is not misused.

Dr. Parrish suggested the following definition: ***"The term depleted means, with respect to a stock of fish in a fishery, that the stock is below the population size defined as overfished in the stock's fishery management plan."***

[Senate (18A)] Also the definition of 'forage fish' in the Senate discussion draft as "any low trophic level fish" is highly problematic – not only for CPS but for many other fisheries as well. Quoting from Dr. Parrish's comments:

"The term low trophic level fish is not defined in the MSRA. Note that a herring is a higher trophic level animal than a wolf. Wolves feed on herbivores; herring feed on a mixture of herbivores, primary carnivores and secondary carnivores. Small Pacific mackerel, Pacific whiting and rockfishes are all 'relatively' low trophic level fishes that feed primarily upon zooplankton. Adult Pacific mackerel, Pacific whiting and rockfishes eat a wide variety of invertebrates and fishes. The adults of these species play a very significant role in energy transfer from lower to higher trophic levels throughout their lives. Which of these species is a forage fish?"

As noted above, the singling out of [inadequately defined] forage species for special consideration in the MSA is not warranted, in light of existing precautionary management.

Section 5 Ensuring Consistent Management

[HR 4742 (a)(b)] HR 4742 includes important clarification that the MSA controls fishery management in the case of conflict with the National Marine Sanctuaries Act and Antiquities Act of 1906, and "To ensure transparency and consistent management of fisheries throughout their range, any restriction on the management of fish in the exclusive economic zone that is necessary to implement a recovery plan under the Endangered Species Act of 1973 (16 U.S.C 1531 et seq.) shall be implemented—

- (1) using authority under this Act; and
- (2) in accordance with processes and time schedules required under this Act

We strongly support this clarification.

Title III – 16 U.S.C. 1851

Section 302 Councils / SSC

[Senate new (g)(1)(B)ii } ... specifies that the SSC shall "develop a control rule to derive annual recommendations for ABC for a forage fishery which account for the importance of forage species to managed fish... and provide a **minimum reference point to determine when a forage fishery should close...**"

In light of the vague definition of 'forage fish', I suspect this section will cause heartburn for many fisheries in addition to CPS. Again, the special treatment accorded forage fish in the Senate discussion draft is unwarranted and unnecessary. This forage section does not acknowledge the highly precautionary management policies already in place. The SSC already approves harvest guidelines for CPS. Moreover, CPS harvest control rule formulas already account for the importance of these species as forage by setting harvest limits that leave at least 75 percent of the stock in the ocean for ecosystem needs. Preliminary ecosystem modeling indicates that CPS fisheries harvest less than 4 percent of the planktivorous biomass, which is only part of the total forage pool. Minimum reference points are already established in stocks where data are available. In many highly dynamic, short-lived stocks (such as market squid) or lightly fished species (such as jack mackerel), reliable data do not exist to establish status determination criteria (SDCs).

[HR 4742 new (m)] – **CONSIDERATIONS FOR MODIFICATIONS TO ANNUAL CATCH LIMIT REQUIREMENTS.**

The addition of this section in the House MSA draft provides guidance and flexibility to Councils:

- (1) to consider the changes in the ecosystem, within prescribed limits, and economic needs of fishing communities, and
- (2) (2) to limit Annual Catch Limit (ACL) requirements for special fisheries, including
 - (A) Ecosystem component species
 - (B) Fisheries for species that have a life cycle of one year [or less -- such as market squid]
 - (C) Stocks for which more than half of a single year class will complete its life cycle in less than 18 months, and fishing mortality will have little impact on the stock.

This section also provides for multi-year ACLS and defines Ecosystem Component species. These provisions are important as they provide flexibility. (A), (B) and (C) are particularly relevant to CPS, and we support the inclusion of this section in the final MSA.

Section 303 Contents of FMPS

(a) Required Provisions

[Senate new (14)] In the case of a fishery for a forage fish...

Again the Senate discussion draft attempts to insert prescriptive, onerous, and unnecessary elements singling out special management of forage fish by adjusting ACLs by “the feeding requirements of dependent fish” and so forth. This section attempts to codify a long-running ‘forage’ campaign mounted by certain ENGOs, seeking management that deducts forage set asides off the top of harvest quotas. This is highly problematic for several reasons –

- Inadequate definition of ‘forage fish’ (in reality, all species are forage for something else at various life stages...)
- the inability to assess the complete forage pool, which includes many unfished stocks equally important to the ecosystem
- the acknowledgement of ecosystem modelers that models are not intended for use in setting quotas

It is noteworthy that PFMC staff footnoted the “substantial amount of work” required if this section were implemented. Substantial and very costly!! This section, along with all reference to ‘forage fish’ as a group deserving special attention should be deleted from the final MSA. All species are important, and all should be treated equally.

Section 303B Fishery Ecosystem Planning Authority (Senate Discussion Draft)

This section, while ostensibly encouraging Council development of Fishery Ecosystem Plans, provides highly detailed requirements for FEPs that “SHALL” be included after MSA reauthorization, but then makes the development of FEPs discretionary. This seems contradictory. First, if Councils may (or may not) develop FEPs at their own discretion, perhaps the content should be left flexible so each Council can address its own regional needs.

At the very least, Section 303B(b), Required Provisions – should be revised to state that FEPs “MAY” contain the elements listed.

Section 304 Action By the Secretary 16 U.S.C. 1854

(e) Rebuilding [overfished] [depleted] Fisheries:

We concur with the Council’s recommendations to differentiate between causes of “depletion”, as specified in HR 4742. The House version also provides flexibility in the time frame to rebuild a stock from a low level, whether overfished or reduced by natural or other non-fishing causes.

The Senate draft contains terms that are not well defined, i.e. “minimum time”, and ‘stock size threshold’.

Please read the discussion on this point in Dr. Parrish’s comments. The current intent is that minimum time is measured given the average productivity of the stock. Dr. Parrish suggests rewording the Senate version: (I) “the sum of the minimum time required to rebuild an affected stock of fish using the stock’s expected reproductive success under the existing environmental conditions and the mean generation time of the affected stock...”

Section 305 Other Requirements

[Senate new (k)] Consumer information regarding sustainably caught fish

We appreciate the inclusion of this provision as it highlights the success of the MSA in conserving U.S. fish stocks.

Section 307 Prohibited Acts 16 U.S.C. 1857

[Senate new (R)] The Senate discussion draft, in an attempt to address seafood fraud, makes it unlawful for any person “to make or submit any incomplete, invalid or false record... of any fish or fish product (including false identification of the species...)”

Considering the myriad regional names given to various fish species, and regional rules, i.e. permissible labeling of 13 rockfish species as “Pacific snapper” in CA, this provision could be a problem unless guidance is also given, such as requiring some standardized naming convention, such as the FDA Fish List.

Section 404 Fisheries Research 16 U.S.C. 1881c

[HR 4742 new (e)] We appreciate the inclusion in the House draft of support for cooperative research activities, as specified here and in Section 318 – Cooperative Research and Management Program

[Senate new (e)] Stock Assessment Plan

We concur with the Council’s concerns regarding the wording of this section. Each Council should establish its own stock assessment schedule, based on regional fisheries and regional needs.

These comments highlight the major issues / comments / concerns in reviewing MSA reauthorization language to date. Other issues may surface as the two Congressional bodies work to meld the two versions into a cohesive unit. Meantime, we thank the Council for considering our point of view on these issues. The key take-away is the intent of MSA – optimum yield strives to conserve a balance: healthy ecosystems and also vibrant fishing communities.

Best regards,



Diane Pleschner-Steele
Executive Director

Ms. Dorothy Lowman, Chair
And Members of the Pacific Fishery Management Council
7700 NE Ambassador Place #101
Portland OR 97220-1384

RE: Agenda Item C.3.d Comments on Magnuson-Stevens Act (MSA) Reform
Legislation

Dear Ms. Lowman and Council members,

I submitted the following comments to Senate Commerce Subcommittee staff regarding the Senate Magnuson-Stevens Act Reauthorization Discussion Draft. I would appreciate the Council's consideration of these comments in your further deliberations and recommendations to Congress regarding reauthorization of the MSA.



Richard Parrish
Fisheries Biologist

Comments on Magnuson-Stevens Act Reform Legislation
Richard H Parrish
May 7, 2014

Before presenting my comments I feel the need to describe my background in commercial marine fisheries. I am a retired NMFS fisheries biologist with 47 years of experience in marine fishery science and management. In addition to my 31 years with NMFS I have worked extensively for the State of California, The Sultanate of Oman, and several commercial fishing companies and organizations. I have a PhD in Fisheries from Oregon State University with minors in Oceanography and Statistics. I was an author of the Fishery Management Plan for Coastal Pelagic Species in the Pacific Council and am heavily involved in both the present CPS Plan Revision and current initiatives for Ecosystem Management in the California Current System.

My comments and page numbers refer to the Staff Working Draft - April 3, 2014.

Section 3 Changes in findings, purposes and policy.

Page 4. Line 18. There is no supporting evidence that there has been any recent development of new fisheries for forage species in the areas managed by the Fishery Management Councils. In the Pacific Council there has not been a development of a new fishery for a forage species since the anchovy fishery in the 1960s.

Section 4 Definitions.

Page 8. Line 6.

“(8A) The terms ‘depleted’ and ‘depletion’ mean, with respect to a stock of fish in a fishery, that the stock is of a size that jeopardizes the capacity of the fishery to produce the maximum sustainable yield on a continuing basis.”

The proposed definition of the term ‘depletion’ is contrary to the established usage and the above change in definition will cause significant confusion.

Depletion, as presently used in many fishery management plans and stock assessments, is completely independent of the MSY population level or overfishing. The accepted scientific use of the term ‘depletion’ refers to the size of the population in relation to the unfished state. The reference point for the term is the unfished (virgin) population size or biomass (i.e. a depletion of 1.0); however, in some stocks, female spawning biomass or reproductive output is used. For example, the 2013 Pacific Hake Assessment reports that during 2004 -2013 the depletion of the hake female spawning biomass varied from a low of 0.204 in 2009 to a high of 0.723 in 2013.

The term depletion should either be removed from (8A) or defined by its present usage. For example:

“The term ‘depletion’ means with respect to a stock of fish that the population size (or other index of the stocks reproductive potential) is a proportion of the estimated average or median long-term population size with no fishing.”

The addition of the term median is necessary as it is being increasingly used for stocks like the Pacific Hake that have significant environmental variation.

The term ‘depleted’ has not been generally used in fishery management and it presently has no generally accepted meaning. In the context of the Magnuson-Stevens Act the definition of ‘depleted’ should refer to the population size that is now used to define an overfished stock.

Suggested wording for (8A).

“The term depleted means, with respect to a stock of fish in a fishery, that the stock is below the population size defined as overfished in the stock’s fishery management plan.”

Page 8. Line 13. “The term ‘forage fish’ means any low trophic level fish “

The term low trophic level fish is not defined in the MSRA. Note that a herring is a higher trophic level animal than a wolf. Wolves feed on herbivores; herring feed on

a mixture of herbivores, primary carnivores and secondary carnivores. Small Pacific mackerel, Pacific whiting and rockfishes are all 'relatively' low trophic level fishes that feed primarily upon zooplankton. Adult Pacific mackerel, Pacific whiting and rockfishes eat a wide variety of invertebrates and fishes. The adults of these species play a very significant role in energy transfer from lower to higher trophic levels throughout their lives. Which of these species is a forage fish?

Page 14. Line 20. The term forage fish is not adequately defined in the MSRA. See above.

Page 15 line 3. (iii). THIS SECTION SHOULD EITHER BE OMITTED OR APPLIED TO ALL ACTIONS OF THE SSCs.

This section implies that the Science and Statistical Committee does not have to 'carry out the requirements' of other subparagraphs in a transparent manner; allowing for public involvement in the process"

Why is transparency in the management of fisheries for forage species (as yet undefined) more important than transparency in the management of fisheries for non-forage species?

Page 18. Line 12. Again forage fish is defined as a low trophic level fish but low trophic level is not defined.

Ecosystem FMP

Page 24 line 5. to page 26 line 25. There is an extensive treatment of ecosystem plans; however, it appears that if the Council approves an ecosystem plan before the reauthorization is completed it will not have to conform to the new provisions.

Page 24 line 5 (b) REQUIRED PROVISIONS.

A series of 'required items and actions' is listed under this section and more are listed in (c) ASSESSMENT AND UPDATING OF PLANS. However, section (d) RULE OF CONSTRUCTION states that nothing in this section shall be construed as requiring a Council or the Secretary to exercise the discretionary planning authority provide by this section.

If a Council does not have to create an ecosystem plan it appears counter-productive to have a long list of required provisions, as any single provision could cause a Council to not create an ecosystem plan or to exclude individual species or species groups from the plan.

The largest problem with the Required Provisions section is that that many ecosystem components have geographical ranges that extend outside of US

Territorial waters. There are many species that have only a minor percentage of their habitat range inside of US waters.

This will result in the Councils excluding many important species from an ecosystem management plan.

Page 20 (d) REBUILDING OVERFISHED AND OTHERWISE DEPLETED FISHERIES.

As mentioned above the term 'depleted' is simply a rewording of the present definition of 'overfished'. The new term 'depleted' is apparently introduced to cover a situation where a fishery is not overfished, however, natural or human induced environmental variation has resulted in the population biomass falling below the overfished biomass level. Note that this situation could also occur with species that are not harvested.

Global warming is coming and it will cause some species to have much reduced population sizes and productivities. How will the proposed revision of the rebuilding requirement be handled when this occurs?

The intention of the proposed addition of 'otherwise depleted' appears to be based on the recognition that natural and human induced environmental variation is capable of reducing the size of exploited marine species. What happens if an, 'otherwise depleted' stock in a multi-species fishery is not capable of recovery due to an altered environment? What happens if a by-catch species is otherwise depleted? Does this mean that a single or multi-species fishery will have to be permanently closed?

The 'fix' of the rebuilding issue appears to be worse than the original.

Page 31, line 22. (ii) (I). This section could have been used to qualify the rebuilding time by acknowledging the fact that a stock may be otherwise depleted due to climate change, or other human induced environmental variation. Unfortunately the proposed wording completely ignores the source of depletion.

Neither the "minimum time" nor the 'stock size threshold' that a stock must be rebuilt to is well defined.

Minimum time:

What appears to be intended (and is currently in use) is the minimum time that a stock would take to recover to some threshold level given the **average** productivity of the stock. Without the inclusion of 'average' the minimum time would be the time it takes to recover with the maximum productivity of the stock.

A wording similar to the following would correct the 'minimum' problem:

(I) the sum of the minimum time required to rebuild an affected stock of fish using the stocks expected reproductive success under the existing environmental conditions and the mean generation time of the affected stock of fish,

Stock size threshold

The act does not state which ‘stock size threshold’ the rebuilding plan is based on. Alternative thresholds could include, MSST, MSY biomass, proxy MSY biomass, some specified depletion level or the ‘new’ depleted population level.

If the term depleted were better defined (see above) this stock size threshold could become the generic rebuilding target.

Page 61 line 16 (45) Stock assessment.

Stock assessments, as developed in the Pacific Council, do not include feeding habits or habitat preferences and there is no evidence that the inclusion of these factors would improve the accuracy of the assessments. Therefore, the beginning of the section should be reworded to establish the fact that a stock assessment may include all of the below but that it does not necessarily include all of them.

Ecosystem models will require stock assessments of major stocks that are not presently fished, therefor fishing for the stock (page 62 line 3) should not be a necessary requirement for a stock assessment.

Suggested re-wording.

(A) a range of life history characteristics for the stock, that may include—

“(i) the geographical boundaries of the stock; and

“(ii) information on age, growth, natural mortality, sexual maturity and reproduction, feeding habits, and habitat preferences of the stock; and

“(iii) fishing for the stock.”.

STOCK ASSESSMENT PLAN SECTION 404

Page 62. Line 18. (i) the reasonable schedule for updating a stock should include the biology, characteristics and “exploitation level” of the stock. Unexploited or lightly exploited stocks do not need to be assessed as often as heavily exploited stocks.

Page 64 Line 10 (B) (i) Same comment. Add “exploitation level.”



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Adak Community Development
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Alaska Bering Sea Crabbers

Alaska Longline Co.

Alaska Whitefish Trawlers
Association

Alaska Groundfish Data Bank
*International Seafoods of Alaska, North Pacific
Seafoods, Trident Seafoods, Western Alaska Fisheries*

Alaska Scallop Association

Aleutian Pribilof Island
Community Development
Association

*Akutan, Atka, False Pass, Nelson Lagoon, Nikolski, St.
George*

Arctic Storm Management
Group

Bristol Bay Economic
Development Corporation

*Aleknagik, Clark's Point, Dillingham, Egegik, Ekwik,
Eliwok, King Salmon, Levelock, Manokotak, Naknek,
Pilot Point, Port Heiden, Portage Creek, South Naknek,
Togiak, Twin Hills, Ugashik*

Central Bering Sea Fishermen's
Association

St. Paul

City of Unalaska

Glacier Fish Company

Groundfish Forum

*Fishermen's Finest, Iliquo US, Ocean Peace, O'Hara
Corporation, United States Seafoods*

High Seas Catchers

Ocean Harvester, Sea Storm, Neahkahnie

Icicle Seafoods

Norton Sound Economic
Development Corporation

*Brevig Mission, Diomedes, Elm, Gambell, Golovin,
Koyuk, Nome, Saint Michael, Savoonga, Shaktopolik,
Stebbins, Teller, Unalakleet, Wales, White Mountain*

Pacific Seafood

Pacific Seafood Processors
Association

*Alaska General Seafoods, Alyeska Seafoods, Golden
Alaska Seafoods, North Pacific Seafoods, Peter Pan
Seafoods, Phoenix Processor Limited Partnership,
Trident Seafoods, UniSea, Westward Seafoods*

United Catcher Boats

Akutan Catcher Vessel Association

Mothership Fleet Cooperative

Northern Victor Fleet

Peter Pan Fleet Cooperative

Unalaska Co-op

Unisea Fleet Cooperative

Westward Fleet Cooperative

May 22, 2014

The Honorable Mark Begich
Chairman
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard
United States Senate
Washington, DC 20510

The Honorable Marco Rubio
Ranking Member
Subcommittee on Oceans, Atmosphere,
Fisheries, and Coast Guard
United States Senate
Washington, DC 20510

Dear Senators Begich and Rubio:

Thank you for providing the Marine Conservation Alliance (MCA) with the opportunity to provide comments on the April 3, 2014 Magnuson-Stevens Act (MSA) Reauthorization Staff Working Draft. Our comments will focus on Ecosystem-Based Fishery Management (EBFM), forage fish management, the definition of bycatch, multi-use allocation review, and the use of best available science. We have also offered comments on the use of "depleted" instead of "overfished" and the clarification that annual catch limits (ACLs) should not apply to each individual species in a Fishery Management Plan (FMP). We may provide a subsequent letter in the next handful of days with suggestions for improving the existing MSA.

The Marine Conservation Alliance is comprised of harvesters, processors, and fishing dependent communities with interests in the Bering Sea, Aleutian Islands, and Gulf of Alaska. Collectively our membership represents the majority of seafood harvested from Federal waters off the coast of Alaska. Our mission is to seek practical, science-based solutions that support sustainable management of fisheries.

1. Executive Summary

The discussion draft attempts to bring the concepts of Ecosystem Based Fishery Management (EBFM) to the forefront of U.S. fishery management. The way in which the discussion draft proposes to do so conflicts with recent literature on EBFM and would depart from generally accepted EBFM practices. The implications are potentially severe with adverse effects to domestic fisheries and upheaval to the U.S. fishery management system. The conservation gains from the proposed language would be questionable at best.

The U.S. fishery management system is working well where it is being implemented as intended and it is not clear that any large systemic problems exist which should be addressed by National legislation. To the best of our knowledge, the problems which continue to exist are regional issues. If the intent of the discussion draft is to address these regional issues, then we suggest that the language be modified to focus on those particular regions.

Our general recommendations are provided in the following bullets:

- Discussion draft text on Findings, Purposes, and Policy needs to be substantially rewritten or deleted. Claims regarding trophic effects, habitat, forage species, bycatch are questionable at best and do little to support the proposed changes to the act.
- The proposed definition of bycatch could be devastating to many of our nation's well-managed fisheries and would cause chaos to our existing fishery management system. This new definition should be struck. Similarly, the proposed requirement that fisheries "avoid" bycatch rather than "minimize" bycatch invites litigation and is not necessary.
- Prescriptive language on forage fish is wholly inappropriate for National legislation and is inconsistent with EBFM practices. Trophic effects matter and should be taken into account; however prescribing specific approaches for a single trophic level is inconsistent with EBFM practice, it ignores important societal values, and may have the unintended effect of minimizing the consideration of trophic effects of other species in the food web.
- Requiring the SSC to develop control rules for forage would undermine the important science/policy divide. It is important that policy makers not weigh in on science, and similarly, it is important that scientists not determine policy. To blur the lines between the two undermines the entire fishery management system and invites litigation. Requiring SSCs to develop control rules for forage fish is inappropriate.
- Given the questionable wisdom of calling out specific provisions for forage fish, we suggest deleting the proposed definition of forage fish. Similarly, there are no standards for the differentiation of target and non-target species in our fishery management system and therefore it is not clear that adding these definitions is wise. In fact, differentiating between the two implies different management and monitoring activities. This increases the complexity of management unnecessarily. These definitions should be stricken.
- Fishery Ecosystem Plans should remain discretionary. FEP provisions should also be discretionary rather than mandatory. FEPs are not necessary for implementing EBFM, but they can be helpful. FEPs should not be subject to Secretarial review and approval for a variety of reasons outlined in a subsequent section of this letter. If it is the intention of the discussion draft to help guide the development and content of FEPs, then we have provided comments in a subsequent section which may be helpful.
- Requiring that stock assessments be done on a fixed schedule for all stocks within an FMP is an impossible task without a significant increase in resources. Second, increasing the frequency of assessments for some species will likely decrease the frequency of assessments on other species. In the North Pacific it has been estimated that fewer surveys would result in a multi-million dollar loss in revenue due to increased management uncertainty. This would have nation-wide implications to the U.S. seafood industry. Stock assessment priorities need to be based on a variety of ecological, economic, and social factors. The section mandating a stock assessment plan should be struck.
- Requiring that information from universities, industry, NGOs, etc be considered "best available science" could undermine the integrity of information which the Council uses to base its decisions. Best available science is best identified through a process of peer review, and the current process which utilizes the SSC is a good model. The requirement that we consider information from particular entities part of "best available science" would appear to undermine scientific integrity.
- Requiring that multi-use fisheries review allocations every 5 years would be an extraordinary tax on Council resources, it is not necessary given existing Council authority to revisit allocations, and it should be struck. If the intention with this proposed language is to address

a regional problem, then language should be added which requires a particular region or Council to conduct this review, not the entire nation.

- Proposed language clarifying that ACLs do not need to apply to all species is a welcome clarification. However, the proposed language would apply only to non-target species. This implies that all target species do in fact need their own ACL. This could cause a large increase in complexity for target species which are lumped in a complex with other species. It is the risk of overfishing that should determine the need for an ACL, not whether the species is a target or non-target species. This intent of the language is welcome, but the reference to non-target species should be struck.
- New terms “depleted” and “depletion” are welcome additions if the intention is to identify those stocks which are depressed due to causes other than fishing. If this is the intention then the definitions of depleted and depletion should substantially mirror the definitions of overfished and overfishing. We have proposed text to this effect in the appropriate section.

2. Overarching Comments

The general consensus of the North Pacific fishing industry is that the MSA – as currently written – works well and that any modifications to the draft should be minor. The MSA works well because it is written in a way that allows for substantial stakeholder input, it allows the Regional Fishery Management Councils (Councils) to tailor fishery management to regional conditions, and – most importantly – it strikes a balance between utilization and conservation. At simple face value, 90 pages of proposed amendments to the MSA is concerning in light of the fact that the act as currently written works well. Digging deeper into the substance of the discussion draft, many of the proposed amendments are highly prescriptive and would substantially change some well-established themes of fishery management in the United States.

The discussion draft adds new standards and requirements and it is not clear how these new standards and requirements relate to the existing National Standards for Fishery Conservation and Management (National Standards). Introducing new approaches and standards outside the National Standard framework invites confusion and litigation. NMFS and the courts would be placed in the position of trying to reconcile the existing National Standards with new requirements that are included in other chapters of the MSA. This confusion is potentially damaging to our Nation’s fishery management system and it does not appear that significant change is necessary.

Significant progress has been made in domestic fisheries management since the implementation of the 2006 MSRA: overfishing has nearly been eliminated; Councils are making significant progress in implementing ecosystem-based approaches to fishery management; and Councils are continuing to find ways to improve their fishery management system. There are of course regional concerns and issues, but in light of the broad-based success where the MSA has been implemented as intended, it is not clear that a systemic problem with our National fishery management framework exists. By extension, it is not clear what problems the discussion draft is trying to address.

Given the large scale success of our current fishery management system and the responsiveness of that system to new information, it is not clear that modifications to the act are necessary. Indeed it is not clear that the system suffers from any systemic problems that National legislation could – or should – strive to address. Instead the problems that exist appear to be regionally-specific concerns, or concerns based on a misunderstanding of fishery management policies. The discussion draft would introduce and alter a substantial amount of text in the MSA but the reasons for doing so are not clear.

3. Ecosystem-Based Fishery Management as a Dominant Theme of the Discussion Draft

It is clear that the discussion draft is attempting to bring the principles of EBFM toward the forefront of U.S. fishery management. However, the way in which the discussion draft introduces EBFM is inconsistent with recent literature, and it is inconsistent with generally accepted practices of implementing EBFM (see Berkes (2012); Browman et al (2004); Constable (2011); Curtain and Prellezo (2010); DeYoung et al (2008); Essington and Punt (2011); Field and Francis (2006); Fulton et al (2014); Hilborn (2011); Harte (2014); Hobday et al (2011); Kock et al (2007); Levin (2013); Levin et al (2013); Marasco et al (2007); Murawski (2007); Rice (2005); Rice (2011); Sherman et al (2005); Tallis et al (2010); Waters et al (2013); Witherell et al (2000)). In an attempt at clarifying what EBFM is and how it is practiced (while also setting the stage for some of our subsequent recommendations) we have briefly summarized available EBFM literature and practice and how it relates to MSA reauthorization.

In general, EBFM means that fisheries management outcomes are placed in a broader ecosystem context that recognizes that ecosystem objectives are: A) socially determined, B) based on existing scientific knowledge, and C) societal expectations for healthy marine ecosystems. The concept of a “healthy ecosystem” is essentially a societal values statement. Social values will change over time and across regions. In other words, what we desire to get out of an ecosystem will change according to regional societal values, and in turn what we perceive as a “healthy ecosystem” will change depending on what we want out of it. For example, communities in the Bering Sea view a healthy ecosystem as one that produces fish and marine mammals for subsistence, employment, and revenue. This perspective can be contrasted with communities off Southern California who will place higher value on recreation and preservation, and lower value on resource extraction. Both examples can be described as a “healthy ecosystem” but the goals of the system are substantially different—and rightly so given the difference in societal values and needs in each region.

Since desirable ecosystem states are socially defined, literature has moved past the notion that there is a state that equates to a “healthy” ecosystem. Instead, attention has turned to how the attributes (or components) of EBFM can be integrated into existing fisheries management practices.

EBFM does not imply a goal that differs from our current fishery management goals. It is an approach to fisheries management that should help us to better attain our goals.

Broadly speaking, the components of EBFM can be grouped into several categories:

- Delineation of the geographic extent of an ecosystem
- Controlling fishing mortality on target species and non-target species
- The effects of fishing on habitat
- Trophic effects caused by fishing
- Managing for external factors (environmental change and ecological forcing)
- Consideration of fishing communities and fishery economics

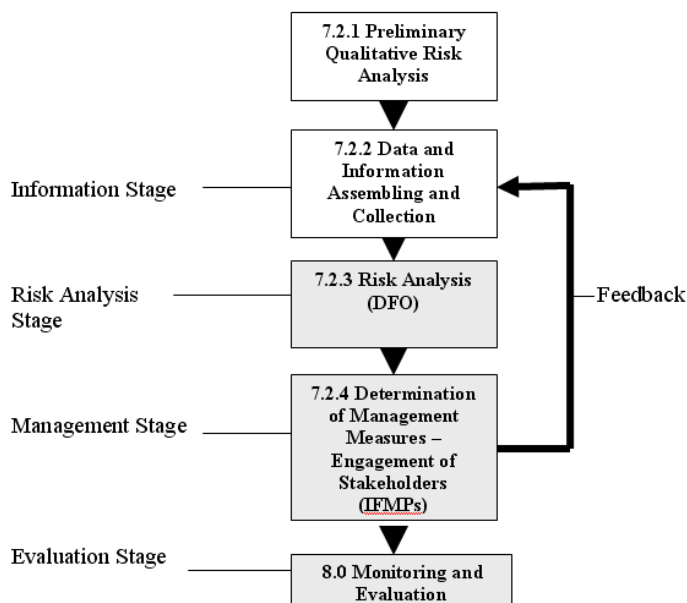
The components that make up EBFM are already included in our nation’s federal fishery management system. For instance, we are required to prevent overfishing (for managed species, not just target species); protect habitat to the extent practical; set OY in a manner that takes into account social, economic, and ecological reasons; and other factors. The best available science used for stock assessment purposes is evolving to include food web dynamics and environmental information in making forecasts of stock abundance. In other words, the components of EBFM are widely included in existing fishery management and Councils are required to take into account these components when making decisions. A recent review of EBFM implementation around the world consistently places the U.S. at, or near, the top in relative rankings against other countries (Harte (2014); Ecosystem Sciences and Management Working Group (2014)).

Perhaps the only readily identifiable area for improvement of EBFM approaches is in the process that exists between scientists and managers, or more specifically, a feedback loop between policy goals and monitoring of an ecosystem¹. An example of how this is used elsewhere can be explained through an approach often called the “ecological risk assessment for fisheries”. The following figure is taken from a Canada Department of Fisheries and Oceans publication on deep sea coral management in fisheries that uses this concept. The take away from this concept is that ecosystem-based fishery management is an iterative approach that invokes a continual process of information collection, analysis, management consideration, and stakeholder involvement – a process that already exists within the existing U.S. Council system.

Figure 1 Depiction of an EBFM process (Source: <http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/benthi-eng.htm>)

Unfortunately, the discussion draft would essentially preempt a dialog between policy and science. The most glaring example is the notion of SSCs establishing control rules for forage fish. This approach would appear to eliminate any dialog between scientists, managers, and stakeholders and would instead place decision-making authority squarely in the hands of the SSC. This is inconsistent with accepted principles of EBFM and it would also undermine the foundation of our fishery management system. EBFM is ultimately about weighing various tradeoffs.

Discussions between policy and science are an important piece of EBFM implementation as it allows for the Councils to understand and weigh such tradeoffs and develop appropriate policies in consultation with the scientific community and in response to regional conditions and values.



One EBFM component is the consideration of trophic effects. The discussion draft effectively elevates trophic considerations for forage fish above trophic considerations of other species. In reality, many species have substantial trophic effects including forage species, key predator species, and other keystone types of species that many components of the food web rely upon. Is it the intention of the discussion draft to minimize these other trophic effects and to mandate forage fish approaches without regard to the broader system and management framework?

The existing MSA requires that Councils consider the role of a species within the ecosystem, meaning trophic effects at all levels should be considered. Prioritizing the role of forage fish in the ecosystem over other species is inappropriate without understanding the broader context of the ecosystem in question and the values of stakeholders. In some systems, predator management may be a more important component

¹ For more information about the feedback loop between science and policy that is an important part of EBFM, it is helpful to review the Ecological Risk Assessment for the effects of Fishing (ERAF) framework. This approach has been adopted in Australia and relies heavily on ongoing communication between policy makers, scientists, and stakeholders.

of attaining desirable ecosystem states than forage management². Mandating that specific approaches be taken for forage would devote resources to forage management that could be better spent on predator management. It is inappropriate for the MSA to prescribe certain management approaches for species which exist at a certain trophic level. Management responses to trophic effects are best done in a broad context and are best left to the regional Councils in consultation with the science community and stakeholders.

4. Text Regarding EBFM Goals and Principles Needs to be Removed or Substantially Altered

New text within the discussion draft attempts to incorporate EBFM through the concepts of trophic effects, habitat, and bycatch, initially referenced in the section on Findings, Purposes, and Policy. The statements within this section, which should provide rationale for other portions of the discussion draft, have questionable accuracy. Therefore, the reason for including provisions in latter portions of the discussion draft on forage, bycatch, habitat, and FEPs is questionable. The discussion draft should remove or substantially alter text on EBFM and EBFM principles (which include forage, bycatch, habitat, and the development of FEPs).

4.1. Text Within Findings, Purposes, and Policy is of Questionable Accuracy and Should be Removed

Proposed modifications to paragraph (2) within “Findings” state that bycatch mortality, trophic impacts, and habitat losses have changed marine ecosystems such that there is a diminished capacity to support fishing levels. These statements are problematic on several fronts because A) there are questions about their accuracy, and B) where damage to habitat and ecosystems occur it is frequently the result of non-fishing factors (coastal wetland loss, runoff, acidification, etc). Except in extreme cases it is better described as a policy tradeoff where the goals of utilization are balanced by the needs of conservation. Describing such outcomes as a net loss in a piece of National legislation is inappropriate.

It is troubling that this proposed language specifically calls out bycatch and trophic interactions as leading to diminished capacity of ecosystems. It is true that fishing activity incurs bycatch and it is true that there are trophic effects that result from fishing. However, the mere presence of bycatch and trophic effects does not automatically equate to reduced capacities of ecosystems. Managers and scientists are well aware that fishing incurs bycatch and has ecological effects. Fishing impacts the ecosystem by definition. To imply that bycatch and trophic effects are a problem is to imply that fishing itself is problematic.

The proposed paragraph (16) within Findings introduces a new problem statement on bycatch that has questionable accuracy. When combined with the new proposed definition of bycatch in later sections of the discussion draft, the newly introduced text could have enormously detrimental effects on existing U.S. fisheries. The proposed text needs to be removed.

Proposed paragraph (11) in Findings makes some dubious claims regarding forage species, their management, and their vulnerability to fishing. In spite of the fact that many regions of the country are responding to new scientific information and invoking conservation measures for forage species, the proposed language states that forage fisheries are expanding and that there are few constraints on their rapid development. This claim is inaccurate. The proposed language goes further in arguing that forage species are highly vulnerable to fishing pressure and that current management approaches put their

² A recent scientific effort in the salt marshes around Cape Cod led researchers to conclude that the absence of predator species was leading to highly abundant populations of plant-eating crabs. The crabs are eating away at the ecologically important grasses in those salt marshes, thus compromising the integrity of the ecosystem. See New York Times article “When predators vanish, so does the ecosystem”

ecological role at risk. Forage fish are no more vulnerable to fishing gear than many other types of fish species. In fact, when considering their short life history, it would be reasonable to argue that they are far less vulnerable than other types of species which may be long-lived and slow growing. In terms of their management, a review of forage fish management around the country will reveal precautionary approaches are being undertaken in many regions of the country, including outright bans on directed fishing for some forage species (see recent actions in PFMC, longstanding regulations in NPFMC, recent actions by ASMFC). Councils act when new scientific information presents itself and they are acting on new information concerning forage species. The claims in this proposed paragraph need to be reconsidered.

4.2. Substantially Modify or Remove References to EBFM from the Section on “Purposes”

Proposed paragraph (5) to “Purposes” would add ecosystem-based fishery management goals and policies that promote ecosystem health, stability, and sustainability, and the conservation and management of fishery resources. This addition could be problematic for a few reasons. One is that EBFM is an approach to fishery management that supports existing goals; it does not imply new goals or purposes. Second, the concept of a “healthy ecosystem” is perplexing since what we desire from an ecosystem is essentially a societal values statement. In other words, what we desire to get out of an ecosystem will change according to regional societal values and evolving scientific information, and in turn what we perceive as a “healthy ecosystem” will change depending on what we want out of it and what we know about it. For public policy purposes, it is further complicated when one considers the presence of a fishery FMP and the goals contained therein. The goals contained within the FMP are a reflection of the Council’s broader goals for a fishery and this is a reflection of what that Council desires from an ecosystem. The text in proposed paragraph (5) implies that somehow healthy EBFM goals would be different from goals of fishery management that are contained within the FMP. The two are the same.

In terms of the concepts of ecosystem stability and sustainability, these terms are problematic because they are false concepts. An ecosystem is a web of intersecting, inter-relating, and inter-dependent components that are constantly changing and adapting. Many of the drivers of this system are cyclic in nature and not man-induced (weather and oceanographic patterns for instance), meaning we are in a position of responding to ecosystem changes rather than driving it (from a fishery management perspective at least). The idea that we can promote ecosystem stability is very questionable.

Ultimately, ecosystem-based fishery management does not imply a set of goals. The available literature on EBFM no longer proposes that EBFM is a revolutionary approach to management (see previously listed references). Instead, literature over the past handful of years argues that EBFM involves the consideration of several different components. A management system which takes these factors into account is doing EBFM. Ultimately then EBFM is not a different goal or a “purpose”, it is an approach that helps us to achieve our stated goals based on evolving scientific information and stakeholder values.

4.3. New Definitions of Bycatch, Target and Non-Target Species, and Forage Fish should be Removed from the Definitions Section

Proposed definitions could cause wide spread harm to domestic fisheries and introduce unnecessary management confusion and complexity. The discussion draft introduces a new definition of bycatch. This new definition needs to be struck. It would cause wide-spread harm, confusion, and disarray to our current management system. For instance, terming fish that are “non-target fish that are harvested in a fishery and retained” as bycatch would have the effect of naming a significant portion of the economic portfolio of multi-species fisheries as bycatch. Second, this definition would effectively result in calling fish that are consumed on board a vessel as “bycatch” since they would not be landed. Finally, defining bycatch as “fish subject to mortality due to direct encounter with fishing gear” could reasonably be

interpreted to mean everything that is killed by fishing gear, whether it is target, non-target, retained, discarded, fish unknowingly killed 200 fathoms below the surface. This definition is economically destructive, impractical to implement, and it is not clear that it would advance any conservation outcome. The existing definition, which equates discard to bycatch, is the only legal definition that will not cause wide-spread chaos in our fishery management system.

Other definitions are introduced regarding target species and non-target species. It is not clear why these new definitions are necessary. National Standard 1 of the MSA requires Councils to “attain Optimum Yield while preventing overfishing” while National Standard 9 requires that Councils minimize bycatch to the extent practicable. There is no standard differentiating target species or non-target species, nor does there need to be. The introduction of these new terms implies that they must be delineated in catch reporting and that management measures need to differ between the two. This would result in the introduction of unnecessary management complexity with outcomes that have questionable value at best.

The discussion draft introduces the term “forage fish” with an accompanying definition. At first blush the definition appears rather specific; however there is significant room for interpretation. For instance “...energy transfer from lower to higher trophic levels throughout its life cycle” will mean different things to different people. It is possible that under the proposed definition that pollock, cod, Pacific whiting and other mid-level trophic species could be considered forage fish by some people and invite litigation if those species are not managed as forage fish. A marine mammal biologist will think about trophic levels much differently than a groundfish biologist. Furthermore, in reference to our prior arguments questioning the wisdom of specific approaches for forage fish, it is not clear that adding a definition of forage fish is appropriate or necessary. All regional Councils are engaged in efforts to better define and understand the food web. Stock assessments increasingly take food web dynamics into account. Considering trophic effects is a wise policy consideration. It is not necessary to call out forage specifically in order to do so, and therefore it is not necessary to add a definition of forage in the MSA. This will only cause more confusion and management complexity.

4.4. Language Describing Fishery Ecosystem Plans (FEPs) Should be Removed or Substantially Modified

Fishery Ecosystem Plans are under development and already exist in various Councils (see Aleutian Islands plan). Although we are not averse to the development of FEPs, we would like to be clear in expressing our belief that they are not necessary in all cases. The existing requirements within the MSA combined with recent scientific developments means that Councils are engaged in EBFM and have been for years. A Council can engage in sound EBFM approaches within the scope of a regular Fishery Management Plan (FMP).

The discussion draft would add language that provides for Secretarial review and approval of a FEP, essentially meaning that a FEP would require the same process (Council decision making, NEPA processes, etc) and hold the same legal authority as a FMP. This creates confusion as to which document is intended to guide fishery management decisions and adds incredible complexity and demands on the system. A FEP should be a guiding document that helps to provide support to the Councils ongoing fishery management goals and activities which are described within FMPs. Language referring to Secretarial approval and review of FEPs should be struck.

Since these plans already exist and are already under development, it is not clear that anything new needs to be included in the act to allow their development. However, if the intention of the proposed language is to help steer the content of these plans and to encourage their development, then we have several comments:

- The first suggestion is that discretionary FEP authority should include discretionary provisions rather than mandatory provisions. The inclusion of mandatory provisions in a discretionary authority may lead to Councils avoiding the development of FEPs. For instance, it would be unfortunate for a Council to develop a FEP, only to find that they are subject to litigation because they did not adequately consider some of the mandatory provisions.
- The goals of a FEP should be identical, or supportive of, the goals of fishery management identified in the National Standards and within a Council FMP. As currently outlined in the discussion draft, there are questions in regards to how FEP goals would reconcile with the existing National Standards. It appears that these goals would be additive, thus requiring Councils to establish a series of goals for a FEP that are in addition to the National Standards (and other acts which impact the Council process). Secondly, it appears that these FEP goals could be established in a way that conflicts with the goals and objectives of a FMP. What then? The discussion draft appears to be written in a way that implies EBFM goals are different from the goals of fishery management. The two are the same. EBFM is an approach used to better attain existing goals. Goals of an FEP should be complimentary to the goals of an FMP and complimentary to the National Standards, not additive, and certainly not in conflict. The language on FEP goals needs substantial revision.
- The Secretarial review and approval of FEPs should be stricken. This would add complexity and increase demands on the process that are not necessary. FMPs should remain the document that is reviewed and approved by the Secretary. The role of FEPs should be to serve as a document for the Council to utilize in order to further the goals and objectives contained within FMPs.
- It is not clear that the content of FEPs as currently outlined in the discussion draft could be implemented. From an implementation perspective it is not clear that readily available, transparent, objective metrics exist for concepts such as “resiliency” and “diversity” and other proposed FEP requirements. In many cases the science is simply not there to do so. Requiring Councils to consider elements which they do not have resources or scientific capacity to track and monitor would almost certainly guarantee that Councils would avoid the development of an FEP altogether. If it is the intention to help guide the Councils through FEP development by itemizing the content of an FEP, then great care needs to be taken to assure that the suggested content of these plans are things which Councils can identify effectively, track realistically, and utilize effectively in order to help further existing goals of management. The current discussion draft lists factors which are poorly defined and for which questionable scientific foundations exist. If the development of FEPs is the goal of this discussion draft, then the suggested provisions of an FEP need to be clear, easily understood, and relatively simple to implement.

4.5. Required Provisions for Forage Fish would be Inconsistent with the MSA’s Purpose of Balancing Conservation and Utilization and would be Inconsistent with EBFM Practices

The discussion draft proposes new text that would modify forage fish management based on the feeding requirements of other fish in the system. The discussion draft also would require that SSCs develop a control rule for forage fish which would close fisheries and be based (presumably) on food web considerations. This language would prevent the Councils from weighing the ecological, social, and economic factors that exist in fisheries management and would be inconsistent with recent literature and accepted principles of EBFM (see references). Furthermore, the language on feeding requirements could be interpreted in any number of ways. For instance, is it the intention of the language that no forage fisheries should exist until the feeding requirements of all fish in an ecosystem are met? This would be an impossible task and would effectively eliminate many forage fisheries that are responsibly managed

today. When combined with other questions about the definition of forage, the control rules established by the SSC, and other matters, this provision could be very detrimental to U.S. fisheries. For instance, some publications refer to two of the Nation's largest fisheries (pollock and Pacific hake) as "forage fish". Is it the intention of this language to impose large scale restrictions on these widely productive, important, and sustainable fisheries?

5. Changes to Committees and Advisory Panels could Fundamentally Alter the Science/Policy Divide

Science and policy must be kept separate. Requiring the SSC to develop control rules undermines the management system because it engages the SSC in policy making. The discussion draft would require that the SSC develop control rules to specify ABCs for forage fish based on their importance to other species and provide a reference point where that fishery should close. This would be an inappropriate use of the SSC. The SSC acts as the arbiter of scientific information that is appropriate for use by Councils as they establish policy and it is important to the entire management system that the SSC remain independent of policy setting.

In the last iteration of the MSA, the role of the SSC was strengthened. SSCs specify the OFL and ACLs (such as the ABC). While the OFL ultimately ends up in regulation, the specification of the OFL is not a matter of policy debate. The OFL is an objective standard that is measured by a stock assessment. The specification of the ABC gets closer to policy; however the ABC is specified based on a policy framework established by the Council which takes into account risk and uncertainty. In this latter case, the SSC is not establishing policy, it is merely making calculations based on policies established by the Council. In both cases, the SSC is responsible for making final measurements, but they are not determining policy. This is an important distinction.

The proposed language on requiring SSCs to establish forage fish control rules would have the effect of making the SSC a policy-making body. This is problematic. Successful fishery management requires that there be a separation between science and policy. Policy makers should not make decisions about what constitutes the best available science, and similarly, scientists should not be determining policy. To do either undermines our entire system, it erodes confidence and trust in the system, and it invites litigation.

Managing fisheries in a way that takes into account trophic effects is best done by Councils after consulting with fishery scientists. To call out specific approaches for forage fish, and to require that the SSCs develop policies for their management, is poor public policy and would undermine our system of Federal fishery management.

6. Functions Requiring Multi-use Allocation to be Revisited on a Fixed Schedule could Extraordinarily Tax Council Resources

Requiring that Councils revisit multi-use fishery allocations every 5 years is concerning. On the one hand, allocation matters can be quite intense and take years to resolve while on the other hand Councils have the authority now to take up allocation at any time, and they are required to make decisions in a way that is fair and equitable. The proposed text requires that a review take place every 5 years which in and of itself does not mandate a new decision. However, the proposed text also states that Councils may "delay action" for not more than three one year periods, indicating that revising allocations every 5 years is the intent of this language. Allocation is incredibly controversial and allocation decisions are often made by Councils only after several years of contemplation and significant stakeholder involvement. Requiring that such decisions be revisited every 5 years (and changed?) imposes an incredible tax on our fisheries management system and it is not clear that such a requirement is necessary given the latitude

Councils have now. If this provision is designed to address controversy embedded in a specific regional fishery such as the GOM red snapper fishery, it might best be handled as a regional provision. Even then, forcing a regional Council to act on a schedule dictated to it by federal legislation is a usurpation of Council authority and counter to the intent of established MSA decision-making processes.

7. Section Titled “Stock Assessment Plan” Needs Substantial Revision or Needs to be Stricken

We recommend that this section be stricken as the NMFS is already undergoing a process for regionally-based stock assessment prioritization.

The discussion draft would require that a plan be developed to assess all stocks under the authority of a fishery management plan and sets out a series of steps and standards which need to be met in order to be consistent with the plan. Without a substantial increase in financial resources to conduct stock assessments, the language in this section outlines an impossible task. Requiring that assessments be done on a set schedule because they are managed under the authority of a FMP ignores many of the factors that ought to go into the determination of stock assessment priorities. In addition, requiring that all species in any FMP around the country be subject to such assessment standards will almost certainly mean that assessments (and associated surveys) will be done less frequently for some species in order to increase the frequency of others. In an internal analysis done by staff at the Alaska Fisheries Science Center, estimates were developed showing the loss of yield to Bering Sea fisheries and the loss in exvessel revenue that would occur if surveys were conducted less frequently. Highlights include: A) reductions in yield of up to 33% for some species, and B) foregone exvessel revenue of up to \$46 million. These figures don’t include foregone revenue measured at the processor level, foregone revenue measured at the wholesale level, losses to seafood industry suppliers, etc. Such a loss would be a large impact to the U.S. domestic seafood industry. Is this really what we want?

Stock assessments are a tool used to support the goals of management. Broadly speaking, these goals include a variety of conservation goals as well as “net National benefits” which are taken to mean employment, contribution to GDP, and other similar metrics. In addition to conservation and economic goals, management also considers social factors and factors that are important to our coastal communities. The prioritization of stock assessment resources should be based on all of these appropriate goals. Second, not all stocks need assessments. Many stocks are currently placed within the “ecosystem component” classification of an FMP which is a classification that manages species without catch limits and is a classification which by and large eliminates directed fishing. These species typically do not need an assessment. They are placed within the FMP to simply restrict fishing activity in order to protect their role in the ecosystem.

Mandating that all stocks within a FMP be assessed on a rigid timeline ignores some of the most important economic, social, and ecological reasons for prioritizing assessment resources. Without a substantial increase in assessment resources, the effect of this section will almost certainly be to negatively (and blindly) impact stock assessment capacity for some species to increase stock assessment frequency for others. This section should be stricken.

8. Language Requiring Information from Certain Entities be Considered “Best Available Science” Should be Struck

The discussion draft introduces language that would require information from particular entities be considered best available science. This section, titled Incorporation of Information from Wide Variety of Sources names universities, communities, fishermen, agencies, and others as entities which generate information that a Council would be required to consider as best available science “as appropriate”. Subsequent paragraphs add language which would require Councils to identify how such information was

used in conservation and management, or alternatively, why information was not used if it is not used to support management. These sections are problematic because they would appear to shift what constitutes best available science away from peer reviewed information and toward particular entities that generate information. Best available science is best determined through a process of peer review, with hypotheses, methods, metrics, and transparency which can be reviewed, replicated, and challenged. Furthermore, requiring Councils to articulate why information was not used in management is a potentially never ending slippery slope that invites litigation. How often do we explain our reasoning for not doing something?

Requiring Councils to consider information from particular entities is a departure from the scientific method and peer review process and sets a dangerous precedent. It is the role of the SSC to determine the best available science to be used by the Council for decision making. Legislation requiring Councils to use information from particular sources could undermine the principles of science-based fishery management and is inappropriate.

9. Support for New Concepts of “Depletion” and “Depleted” but some Clarification Needed.

The discussion draft introduces the terms “depleted” and “depletion”. It appears that these new definitions are intended to complement the terms “overfished” and “overfishing”, with the difference being that “depleted” and “depletion” would be environmentally driven actions/outcomes. If this is the case, then these definitions would benefit from some further consideration and additional specificity. We would propose that the language be modified to substantially mirror the definitions of “overfished” and “overfishing”, but with some exceptions:

Current Definition of Overfished and Overfishing: “The terms “overfishing” and “overfished” mean a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce the maximum sustainable yield on a continuing basis.”

Proposed Definition of Depleted and Depletion: “The terms “depleted” and “depletion” mean a rate or level of mortality derived from sources other than fishing that jeopardizes the capacity of a fishery to produce the maximum sustainable yield on a continuing basis.”

10. Limitations that Clarify the Applicability of ACLs is well intentioned, but would benefit from Additional Clarification.

The discussion draft proposes to add text that would clarify that ACLs do not need to be applied to each individual non-target species that is harvested in a fishery. We appreciate the clarity that would be added by this section; however it is not clear that this text needs to make the distinction of “non-target species” in order to provide the necessary clarity. Indeed, this text could be construed as indicating that all target species do need their own individual ACL and this could create problems in many fisheries where stock complexes exist, overfishing is not a concern, but some limited targeting of the species in those complexes occur (see various rockfish complexes in the North Pacific and Pacific, skate complexes, etc). We recommend that the language be changed to drop the reference to non-target species.

We thank you for the opportunity to weigh in on this very important matter, and greatly appreciate you sharing this discussion draft with us. We hope that we can continue to work with you as reauthorization of the MSA unfolds. We believe the discussion draft reflects some good intentions that are meant to help advance sustainability and ensure the long term health of our Nation’s fisheries; however a review of the proposed language would lead to many unintended consequences, some of which would be very

detrimental to our Nation's fisheries without an apparent conservation benefit. We hope our comments are helpful in avoiding these problems and look forward to working with you in the future.

Sincerely,

A handwritten signature in dark ink, appearing to read 'MB', with a stylized flourish extending to the right.

Merrick Burden
Executive Director

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FISCAL MATTERS

The Council's Budget Committee will meet on Thursday, June 19, 2014, at 2:30 P.M. to consider budget issues as outlined in the Budget Committee Agenda.

The Budget Committee's Report is scheduled for Council review and approval on Wednesday, June 25.

Council Action:

Consider the report and recommendations of the Budget Committee.

Reference Materials:

1. Agenda Item C.4.b, Supplemental Budget Committee Report.

Agenda Order:

- a. Agenda Item Overview
- b. Report of the Budget Committee
- c. Reports and Comments of Advisory Bodies and Management Entities
- d. Public Comment
- e. **Council Action:** Consider Budget Committee Recommendations

Chuck Tracy
Dave Ortmann

PFMC
5/28/14

BUDGET COMMITTEE REPORT

The Budget Committee (BC) met on Thursday, June 19, 2014 and received the Executive Director's Budget Report for the fifth year of the 2010-2014 Cooperative Agreement. The report covered: (1) status of funding for calendar year (CY) 2014; (2) a proposed operating budget for CY 2014; (3) summary of expenditures through May, and; 4) a discussion of potential funding for future years. The BC attendance was as follows:

Present: Mr. Dave Ortmann, Chairman; Ms. Michele Culver, Dr. Dave Hanson, Ms. Dorothy Lowman, Mr. Dale Myer, and Mr. Dan Wolford

Absent: Mr. Bob Turner

Non-members Present: Mr. David Crabbe, Mr. Chuck Tracy, Ms. Patricia Crouse, Mr. Donald Hansen, Dr. Donald McIsaac, Mr. Rod Moore, Mr. Pete Hassemer, and Mr. Troy Buell

Summary of CY 2014 Funding

Normal Council Operations

Dr. McIsaac reported that there is still some uncertainty with regard to the upper extent of the Council's final funding for FY 2014. The NMFS proposed spending plan includes a 3.99 percent Management and Administration Cost for the Regional Councils line item. If that spending plan is approved, the Pacific Council would receive \$4.0 million for the aggregate of all line items, which is approximately 3.3 percent less funding than in 2012, but about 7.7 percent more than in 2013. The NMFS proposed spending plan has been submitted to Congress, where it has remained for an extended period without approval as discussions regarding the Management and Administration Cost continue.

Proposed CY 2014 Budget and Status of Expenditures

Based on Council guidance from November 2013 and cost and program updates since then, Dr. McIsaac presented the BC with a proposed CY 2014 operating budget of \$4,476,870. This amount is about four percent above the November 2013 adopted provisional budget, covering a funded earmark for advisory body stipends, updated travel and meeting costs for 2014, a one percent General Schedule cost of living adjustment, and miscellaneous updates. The budget provides for status quo Council operations for 2014.

Expenditures of the proposed CY 2014 budget are proceeding within normal expectations for the first five months of the year. The Council staff and BC will consider additional expenditure and income information at the September Council meeting and recommend any other appropriate action at that time.

Preliminary Expectations for Future Funding

Dr. McIsaac reported that the House and Senate have passed Commerce, Justice and Science appropriations bills with \$32.0 and \$32.8 million in the Regional Council and Fisheries

Commissions line items, respectively, which are similar to the final amount adopted in recent years. Given the status of Congressional action and NMFS adjustments to Council-dependent line items the past two years, there remains significant uncertainty about the Regional Fishery Management Council funding level for 2015 and beyond, as well as when actual funding level will be known.

Budget Committee Recommendations

The BC recommends the Council adopt a CY 2014 operating budget of \$4,476,870.

PFMC
06/24/14

MEMBERSHIP APPOINTMENTS

During this agenda item, the Council has the opportunity to consider Administrative appointment issues with regard to the Council Membership Roster, including Council Members, advisory body membership, and also any relevant changes in Council Operating Procedures (COP) or the Council's Statement of Organization, Practices, and Procedures (SOPP).

Election of Council Chair and Vice Chairs

The Council is slated to elect officers at this meeting. Council Operating Procedure (COP) 1 provides for election of Council officers as follows:

The Chair and up to two Vice Chairs of the Council shall be elected by majority vote of Council members present and voting. Generally, elections are held during the June Council meeting. Officers shall serve one-year terms, which commence August 11 and end August 10 of the following year. Appointments may be renewed for additional one-year terms by majority Council vote at the next June meeting. The Chair may not serve more than two consecutive one-year terms.

Ms. Lowman is in her first term as Council Chair and Mr. Pollard is in his first term as Council Vice Chair.

Council Members and Designees

As of the briefing book deadline, no new Council Members or designees were identified.

Standing Council Member Committee Appointments

As of the briefing book deadline, no new members were identified.

Council Advisory Body Appointments

Salmon Advisory Subpanel (SAS)

As of the advertised deadline, the Council received two nominations for the vacant California Commercial Troll seat, which should be appointed at this meeting:

- Mr. Dave Bitts, nominated by Pacific Coast Federation of Fishermen's Associations and supported by Mr. Jim Hie (Closed Session A.1.a, Attachment 1).
- Mr. George Bradshaw, nominated by Mr. Jim Anderson and supported by the Oregon Salmon Commission (Closed Session A.1.a, Attachment 2).

As of the advertised deadline, the Council received one nomination for the vacant Commercial Gillnet seat, which should be appointed at this meeting:

- Mr. Greg Johnson, nominated by Salmon for All and supported by Mr. Kent Martin (Closed Session A.1.a, Attachment 3).

Highly Migratory Species Advisory Subpanel (HMSAS)

Council staff was notified that Mr. Steve Foltz (Processor South of Cape Mendocino) was resigning his position (Closed Session A.1.a, Attachment 6). The Council should solicit for a replacement to be filled at the September Council meeting

Scientific and Statistical Committee (SSC)

Mr. Virgil Moore has nominated Mr. Alan Byrne to replace Dr. Charlie Petrosky as the Idaho Fish and Game representative on the SSC (Closed Session A.1.a, Attachment 7).

Changes to Council Operating Procedures

No proposed changes to the COPs or SOPPs were identified by the Briefing Book deadline.

Council Action:

1. Consider any appointment and membership issues.

Reference Materials:

1. Closed Session A.1.a, Attachment 1: Nomination of Mr. Dave Bitts to the California Troll seat on the Salmon Advisory Subpanel.
2. Closed Session A.1.a, Attachment 2: Nomination of Mr. George Bradshaw to the California Troll seat on the Salmon Advisory Subpanel.
3. Closed Session A.1.a, Attachment 3: Nomination of Mr. Gregg Johnson to the Commercial Gillnet seat on the Salmon Advisory Subpanel.
4. Closed Session A.1.a, Attachment 6: Resignation of Mr. Steve Foltz from the Processor south of Cape Mendocino seat on the Highly Migratory Species Advisory Subpanel.
5. Closed Session A.1.a, Attachment 7: Nomination of Mr. Alan Byrne to the IDFG seat on the Scientific and Statistical Committee.

Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies and Management Entities
- c. Public Comment
- d. **Council Action:** Elect Council Chair and Vice Chair; Appoint Individuals to Advisory Bodies; and Consider Changes to Council Operating Procedures

Chuck Tracy

PFMC
05/30/14

FUTURE COUNCIL MEETING AGENDA AND WORKLOAD PLANNING

This agenda item is intended to refine general planning for future Council meetings, especially in regard to finalizing the proposed agenda for the September 2014 Council Meeting. The following primary attachments are intended to help the Council in this process:

1. An abbreviated display of potential agenda items for the next full year (Attachment 1).
2. A preliminary proposed September 2014 Council meeting agenda (Attachment 2).

The Executive Director will assist the Council in reviewing the proposed agenda materials and discuss any other matters relevant to Council meeting agendas and workload. After considering supplemental material provided at the Council meeting, and any reports and comments from advisory bodies and public, the Council will provide guidance for future agenda development, a proposed September Council meeting agenda, and workload priorities for Council staff and advisory bodies.

Council Action:

- 1. Review pertinent information and provide guidance on potential agenda topics for future Council meetings.**
- 2. Provide final guidance on a proposed agenda for the September Council meeting.**
- 3. Identify priorities for advisory body considerations at the next Council meeting.**

Reference Materials:

1. Agenda Item C.6.a, Attachment 1: Pacific Council Workload Planning: Preliminary Year-at-a-Glance Summary.
2. Agenda Item C.6.a, Attachment 2: Draft Proposed Council Meeting Agenda, September 10-17, 2014 in Spokane, Washington.

Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies and Management Entities
- c. Public Comment
- d. **Council Action:** Discussion and Guidance on Future Meeting Agenda and Workload Planning

Don McIsaac

Pacific Council Workload Planning: Preliminary Year-at-a-Glance Summary

(Parenthetical numbers mean multiple items per topic; deletions = strikeout; underline = new; shaded items may be rescheduled pending workload priorities)

5/29/14 12:33

	<u>September 12-17, 2014</u> (Spokane)		<u>November 14-19, 2014</u> (Costa Mesa)		<u>March 7-12, 2015</u> (Vancouver)		<u>April 11-16, 2015</u> (Rohnert Park)		<u>June 12-17, 2015</u> (Spokane)		<u>Acronyms</u>
CPS			NMFS Rpt	1.00			NMFS Rpt	1.00	NMFS Rpt	0.50	ACL: Annual Catch Limits AMP: Adaptive Management Program CCC: Council Coordination Committee COP: Council Operating Procedure CPS: Coastal Pelagic Species CSP: Catch Sharing Plan DGN: Drift Gillnet EFH: Essential Fish Habitat EFP: Exempted Fishing Permit EFT: Electronic Fish Ticket EM: Electronic Monitoring FPA: Final Preferred Alternative GF: Groundfish HMS: Highly Migratory Species IEA: Integrated Ecosystem Assessment IPHC: International Pacific Halibut Commission LCN: Lower Columbia Natural Sanctuary MP: Marine Planning (formerly CMSP) NMS: National Marine NS2G: National Standard 2 Guidelines PPA: Preliminary Preferred Alternative ROA: Range of Alternatives SAFE: Stock Assessment and Fishery Evaluation SDC: Status Determination Criteria VMS: Vessel Monitoring System
	Sardine Harvest Fraction PPA	2.00	EFP Notice of Intent for 2015	1.00	Final EFP Approval	0.75	Sardine Asmnt & Mgmt Meas.	3.00	Pacific Mackerel Assment and Management Measures	2.00	
			Sardine Harvest Fraction FPA	2.00							
			Method Rev.--Identify Topics	1.00	Method Rev: Final Approval	1.50					
Groundfish	NMFS Report	0.75	NMFS Report	1.00	NMFS Report	0.00	NMFS Report	1.00	NMFS Report	1.00	
	Inseason Mgmt	1.00	Inseason Mgmt	1.00	Inseason Mgmt	0.00	Inseason Mgmt	2.00	Inseason Mgmt	2.00	
	Adopt Final Stk Assmnt Plan	2.50							Approve Stk Assessments	4.00	
	Meth Rev Process COP	1.50	Meth Rev Process COP Finalize	1.00			Pacific Whiting Update	1.00			
							Adopt Spex Process for 2017-18	2.00			
	Sablefish Catch Share Program	0.00	Sablefish Catch Share Prog. Rev.	0.00				2.50			
	Review Phase 2 ROA		Phase 2 Check-in								
	Omnibus Regulation Changes	4.00	Omnibus Reg. Changes <u>ROA</u>	3.00	Omnibus Reg. Changes <u>PPA</u>	3.00	Omnibus Reg. Changes <u>FPA</u>	3.00	Omnibus Regulation Changes: Further Consideration	2.50	
	Prioritization Including:										
	Trawl Trailing Actions:										
	Off-Cycle Mgmt Measrues										
	Sablefish Review										
	Initiate EFH Amendment	4.00			EFH A-25: ROA	3.00					
	A-19 Eval Rpt; Issue Scoping										
	Elec Monitoring Regs: Adopt	4.00							Elec Monitoring Regs Update	2.50	
	FPA as Appropriate; Next Steps										
HMS			NMFS Report	1.00	NMFS Report	1.00			DGN Transition Issues	2.00	
	International Issues	2.00	International Issues	2.00	US-Canada Albacore Update	1.00			International Issues	2.00	
	Preliminary EFP Approval	1.00	Final EFP Approval	1.00	International Issues	2.00			Preliminary EFP Approval	1.00	
	Routine Mgmt Measures ROA	1.50	Routine Mgmt Measures FPA	1.00							
Salmon			NMFS Rpt	1.00	NMFS Rpt	1.00	NMFS Rpt	1.00			
	Method Rev: Adopt Priorities	0.50	Method Rev: Final Approval	2.50	Approve Review (SAFE),	1.50	2015 Method Rev.--Identify	1.00			
	LCN Coho Preliminary Action	1.00	LCN Coho Final Recommendation	1.00	Forecasts, SDC, and ACLs		Topics	1.00			
			2015 Preseason Mgmt Schd	0.25	2015 Season Setting (5)	8.25	2015 Season Setting (3)	5.50			
Other	Routine Admin (11)	4.75	Routine Admin (11)	4.75	Routine Admin (10)	5.50	Routine Admin (10)	5.50	Routine Admin (11)	4.75	
	Habitat Issues	0.75	Habitat Issues	1.00	Habitat Issues	0.75	Habitat Issues	0.75	Habitat Issues	1.25	
	NMFS Enforcement Priorities	1.00			Annual USCG Fishery Enf. Rpt	1.00					
	Tri-State Enforcement Rpt	1.00			P. Halibut: Prelim Incidntl Regs	0.50	P. Halibut: Final Incidntl Regs	0.50			
	P. Halibut: CSP Change ROA	2.00	P. Halibut: Final CSP Changes	2.00	P. Halibut: IPHC Meeting	0.75					
	P. Halibut Bycatch Estimate	0.50			CA Current Ecosystem Rpt	2.00					
	Unmanaged Forage Fish	3.00	MP Update	1.00	Incl. IEA Rpt						
	Protection initiative										
	Albatross Avoidance Briefing	1.00	Electronic Technology Plan	2.00							
	Atlantis Review Report	1.50	(non-Catch Share)								
	Economic Data Program	1.00									
	Report on Fishery Status										
	Allocation Review Issues	1.50	NS2G COP	1.00							
Apx. Floor Time	5.5 days	43.75	4.1 days	32.50	4.2 days	33.50	3.7 days	29.75	3.2 days	25.50	

Agenda Item C.6.a
Attachment 1
June 2014

DRAFT PROPOSED PACIFIC COUNCIL MEETING AGENDA, SEPTEMBER 10-17, 2014 IN SPOKANE, WASHINGTON

Acronyms	Fri, Sept 12	Sat, Sept 13	Sun, Sept 14	Mon, Sept 15	Tue, Sept 16	Wed, Sept 17
<i>BC: Budget Committee</i> <i>COP: Council Operating Procedures</i> <i>CPSAS and CPSMT: Coastal Pelagic Species Advisory Subpanel and Management Team</i> <i>EC: Enforcement Consultants</i> <i>ED: Executive Director</i> <i>EFH: Essential Fish Habitat</i> <i>EFP: Exempted Fishing Permit</i> <i>FPA/PPA: Final/Preliminary Preferred Alternative(s)</i> <i>GAP and GMT: Groundfish Advisory Subpanel and Management Team</i> <i>HC: Habitat Committee</i> <i>HMSAS and HMSMT: Highly Migratory Species Advisory Subpanel and Management Team</i> <i>LC: Legislative Committee</i> <i>ROA: Range of Alternatives</i>	CLOSED SESSION 8 AM Discuss Litigation and Admin. Matters (1 hr) A. CALL TO ORDER 9 AM 1-4. Opening Remarks, Roll Call, ED Report, Approve Agenda (30 min) B. OPEN COMMENT 1. Comments on Non-Agenda Items (30 min) C. ENFORCEMENT 1. Current Enforcement Issues: Tri-State Fishery Enforcement Report (1 hr) D. HABITAT 1. Current Habitat Issues (45 min) E. ADMINISTRATIVE 1. Allocation Review Issues (1 hr) 2. Albatross Avoidance Briefing (1 hr) F. SALMON 1. Methodology Review Priority Topics (30 min) 2. Lower Columbia Coho Harvest Matrix ROA (1 hr)	G. COASTAL PELAGIC SPECIES 1. Sardine Harvest Fraction PPA (2 hr) H. GROUNDFISH 1. Final Stock Assessment Plan (2 hr 30 min) 2. Methodology Review Process COP (1 hr 30 min) 3. Consideration of Inseason Adjustments (2 hr)	I. HIGHLY MIGRATORY SPECIES 1. Update on Regulatory Matters and International Activities (2 hr) 2. Preliminary EFP Approval (1 hr) 3. Routine Management Measures ROA (1 hr) E. ADMINISTRATIVE 3. Legislative Matters (1 hr) H. GROUNDFISH 4. Omnibus Regulation Changes: Prioritize List of New Management Measures, Catch Share Trailing Actions, and Off-Cycle Management Measures (2 hr) <i>Continues on Monday</i>	J. ECOSYSTEM 1. Unmanaged Forage Fish Protection Initiative FPA (3 hr) 2. Atlantis Model Review (1 hr 30 min) H. GROUNDFISH 4. <i>Continued from Sunday</i> Omnibus Regulation Changes: Prioritize List of New Management Measures, Catch Share Trailing Actions, and Off-Cycle Management Measures (2 hr) 5. Economic Data Program Report on Fishery Status (1 hr) 6. Fixed Gear Sablefish Catch-Share Program Review, Phase 2 ROA (2 hr 30 min)	H. GROUNDFISH 7. Electronic Monitoring Regulatory Process FPA and Next Steps (4 hr) 8. EFH Amendment 25 Scoping and Amendment 19 Evaluation Report (4 hr)	K. PACIFIC HALIBUT 1. CSP Changes ROA (2 hr) 2. Bycatch Estimates (30 min) <i>(Replaced with Info Report)</i> C. ENFORCEMENT 2. NMFS Enforcement Priorities (1 hr) E. ADMINISTRATIVE 4. Approve Council Minutes (15 min) 5. Fiscal Matters (15 min) 6. Membership Appointments and COPs (15 min) 7. Future Council Meeting Agenda and Workload Planning (1 hr)
Wed, Sept 10						
8 am Joint SSC Econ SubCom & GMT						
Thu, Sept 11	7.25 hr	8 hr	7 hr	7.5 hr	8 hr	4.75 hr
11 am Secretariat 8 am GAP & GMT 8 am SAS 8 am CPSAS & CPSMT 8 am SSC 8 am EC 8:30 am HC 1 pm LC 2:30 pm BC 4 pm Chair's Briefing	7 am State Delegations 7 am Secretariat 8 am GAP & GMT 8 am HMSAS & HMSMT 8 am SSC Ad hoc EC 6 pm Chair's Reception	7 am State Delegations 7 am Secretariat 8 am GAP & GMT 8 am HMSAS & HMSMT Ad hoc EC	7 am State Delegations 7 am Secretariat 8 am GAP & GMT 8 am EAS Ad hoc EC	7 am State Delegations 7 am Secretariat 8 am GAP & GMT Ad hoc EC 7 pm NMFS Recreation Policy Meeting	7 am State Delegations 7 am Secretariat 8 am GAP & GMT Ad hoc EC	7 am State Delegations 7 am Secretariat Agenda Item C.6.a Attachment 2 June 2014

Pacific Council Workload Planning: Preliminary Year-at-a-Glance Summary

(Parenthetical numbers mean multiple items per topic; deletions = strikeout; underline = new; shaded items may be rescheduled pending workload priorities) 6/25/14 10:01						
	September 12-17, 2014 (Spokane)	November 14-19, 2014 (Costa Mesa)	March 7-12, 2015 (Vancouver)	April 11-16, 2015 (Rohnert Park)	June 12-17, 2015 (Spokane)	Acronyms
CPS	Sardine Harvest Fraction PPA	NMFS Rpt EFP Notice of Intent for 2015 Sardine Harvest Fraction FPA Method Rev.--Identify Topics	Final EFP Approval Pacific Mackerel Set Aside Method Rev: Final Approval	NMFS Rpt Sardine Assmnt & Mgmt Meas.	NMFS Rpt Pacific Mackerel Assment and Management Measures	ACL: Annual Catch Limits AMP: Adaptive Management Program CCC: Council Coordination Committee COP: Council Operating Procedure CPS: Coastal Pelagic Species CSP: Catch Sharing Plan DGN: Drift Gillnet EFH: Essential Fish Habitat EFP: Exempted Fishing Permit EFT: Electronic Fish Ticket EM: Electronic Monitoring FPA: Final Preferred Alternative GF: Groundfish HMS: Highly Migratory Species IEA: Integrated Ecosystem Assessment IPHC: International Pacific Halibut Commission LCN: Lower Columbia Natural MP: Marine Planning (formerly CMSP) NMS: National Marine Sanctuary NS2G: National Standard 2 Guidelines PPA: Preliminary Preferred Alternative ROA: Range of Alternatives SAFE: Stock Assessment and Fishery Evaluation SDC: Status Determination Criteria VMS: Vessel Monitoring System
Groundfish	NMFS Report Inseason Mgmt Adopt Final Stk Assmnt Plan Meth Rev Process COP Economic Data Program Report on Fishery Status Sablefish Catch Share Program Review Phase 2 ROA Omnibus Regulation Changes Prioritization Including: Trawl Trailing Actions; Off-Cycle Mgmt Measures Sablefish Review Initiate EFH Amendment A-19 Eval Rpt; Issue Scoping Elec Monitoring Regs: Adopt FPA as Appropriate; Next Steps	NMFS Report Inseason Mgmt Meth Rev Process COP Economic Data Program Report on Fishery Status Sablefish Catch Share Prog. Rev. Phase 2 Check-in Omnibus Reg. Changes ROA Initiate EFH Amendment	NMFS Report Inseason Mgmt Meth Rev Process COP Finalize Omnibus Reg. Changes PPA EFH A-25: ROA	NMFS Report Inseason Mgmt Pacific Whiting Update Adopt Spex Process for 2017-18 Omnibus Reg. Changes FPA	NMFS Report Inseason Mgmt Approve Stk Assessments Omnibus Regulation Changes: Further Consideration Elec Monitoring Regs Update	
HMS	International Issues Preliminary EFP Approval Routine Mgmt Measures ROA	NMFS Report International Issues Final EFP Approval Routine Mgmt Measures FPA	NMFS Report US-Canada Albacore Update International Issues		DGN Transition Issues International Issues Preliminary EFP Approval	
Salmon	Method Rev: Adopt Priorities LCN Coho Preliminary Action	NMFS Rpt Method Rev: Final Approval LCN Coho Final Recommendation 2015 Preseason Mgmt Schd	NMFS Rpt Approve Review (SAFE), Forecasts, SDC, and ACLs 2015 Season Setting (5)	NMFS Rpt 2015 Method Rev.--Identify Topics 2015 Season Setting (3)		
Other	Routine Admin (11) Habitat Issues NMFS Enforcement Priorities Tri-State Enforcement Rpt P. Halibut: CSP Change ROA P. Halibut Bycatch Estimate (IR) Unmanaged Forage Fish Protection initiative Albatross Avoidance Briefing (IR) Atlantis Review Report Executive Order Comments Allocation Review Issues (IR)	Routine Admin (11) Habitat Issues P. Halibut: Final CSP Changes MP Update Electronic Technology Plan (non-Catch Share) Atlantis Review Report NS2G COP	Routine Admin (10) Habitat Issues Annual USCG Fishery Enf. Rpt P. Halibut: Prelim Incidntl Regs P. Halibut: IPHC Meeting CA Current Ecosystem Rpt Incl. IEA Rpt	Routine Admin (10) Habitat Issues P. Halibut: Final Incidntl Regs	Routine Admin (11) Habitat Issues Annual NMFS Enforcement Rpt	
Apx. Floor Time	5.7 days	5.2 days	4.4 days	3.7 days	3.3 days	

Agenda Item C.6.a
 Supplemental Attachment 3
 June 2014

DRAFT PROPOSED PACIFIC COUNCIL MEETING AGENDA, SEPTEMBER 10-17, 2014 IN SPOKANE, WASHINGTON

Acronyms	Fri, Sept 12	Sat, Sept 13	Sun, Sept 14	Mon, Sept 15	Tue, Sept 16	Wed, Sept 17
<p>BC: Budget Committee COP: Council Operating Procedures CPSAS and CPSMT: Coastal Pelagic Species Advisory Subpanel and Management Team EC: Enforcement Consultants ED: Executive Director EFH: Essential Fish Habitat EFP: Exempted Fishing Permit FPA/PPA: Final/Preliminary Preferred Alternative(s) GAP and GMT: Groundfish Advisory Subpanel and Management Team HC: Habitat Committee HMSAS and HMSMT: Highly Migratory Species Advisory Subpanel and Management Team LC: Legislative Committee ROA: Range of Alternatives</p>	<p>CLOSED SESSION 8 AM Discuss Litigation and Admin. Matters (1 hr)</p> <hr/> <p>A. CALL TO ORDER 9 AM 1-4. Opening Remarks, Roll Call, ED Report, Approve Agenda (30 min)</p> <hr/> <p>B. OPEN COMMENT 1. Comments on Non-Agenda Items (30 min)</p> <hr/> <p>C. SALMON 1. Methodology Review Priority Topics (30 min) 2. Lower Columbia Coho Harvest Matrix ROA (1 hr)</p> <hr/> <p>D. ENFORCEMENT 1. Current Enforcement Issues: Tri-State Fishery Enforcement Report (1 hr) 2. NMFS Enforcement Priorities (1 hr)</p> <hr/> <p>E. COASTAL PELAGIC SPECIES 1. Sardine Harvest Fraction PPA (3 hr)</p> <hr/>	<p>F. HIGHLY MIGRATORY SPECIES 1. Update on Regulatory Matters and International Activities (2 hr) 2. Preliminary EFP Approval (5± hr)</p> <hr/> <p>G. PACIFIC HALIBUT 1. CSP Changes ROA (2 hr) 2. Bycatch Estimates (30 min) <u>(Replaced with Info Report)</u></p> <hr/>	<p>F. HIGHLY MIGRATORY SPECIES 3. Routine Management Measures ROA (5± hr)</p> <hr/> <p>H. ECOSYSTEM 1. Unmanaged Forage Fish Protection Initiative FPA (2 hr 15 min) 2. Atlantis Model Review (1 hr 30 min) <u>Moved to November</u></p> <hr/> <p>I. HABITAT 1. Current Habitat Issues (45 min)</p> <hr/>	<p>J. GROUND FISH 2. Omnibus Regulation Changes (6 hr) 3. Final Stock Assessment Plan (2 hr 30 min) 2. Methodology Review Process COP (1 hr 30 min) <u>Moved to November</u> 8. EFH Amendment 25 Scoping and Amendment 19 Evaluation Report (4 hr) 1. Economic Data Program Report on Fishery Status (1 hr) <u>Moved to November</u></p> <hr/>	<p>J. GROUND FISH 4. Electronic Monitoring Regulatory Process FPA and Next Steps (6 hr) 5. Consideration of Inseason Adjustments (2 hr)</p> <hr/>	<p>K. ADMINISTRATIVE 1. Legislative Matters (1 hr) <u>2. Comments on Executive Orders (1 hr)</u> 3. Approve Council Minutes (15 min) 4. Fiscal Matters (15 min) 5. Membership Appointments and COPs (30 min) 6. Future Council Meeting Agenda and Workload Planning (2 hr) 1. Allocation Review Issues (1 hr) <u>(Replaced with Info Report)</u> 2. Albatross Avoidance Briefing (1 hr) <u>(Replaced with Info Report)</u></p> <hr/>
Wed, Sept 10						
<p><u>1 pm</u> Joint SSC Econ SubCom & GMT <u>1 pm</u> HMSMT</p>						
Thu, Sept 11	7.5 hr	9 hr	8 hr	8.5 hr	8 hr	5 hr
<p>11 am Secretariat 8 am CPSAS & CPSMT 8 am SSC 8 am HMSAS & H MSMT 8 am GAP & GMT 8 am SAS 8:30 am HC 1 pm LC 2:30 pm BC 4 pm Chair's Briefing</p>	<p>7 am State Delegations 7 am Secretariat</p> <p>8 am SSC 8 am HMSAS & HMSMT 1 pm GAP & GMT</p> <p>3 pm EC 6 pm Chair's Reception</p>	<p>7 am State Delegations 7 am Secretariat</p> <p><u>8 am HMSAS & HMSMT</u> 8 am GAP & GMT 8 am EAS</p> <p>Ad hoc EC</p>	<p>7 am State Delegations 7 am Secretariat</p> <p>8 am GAP & GMT</p> <p>Ad hoc EC</p>	<p>7 am State Delegations 7 am Secretariat</p> <p>8 am GAP & GMT</p> <p>Ad hoc EC</p>	<p>7 am State Delegations 7 am Secretariat</p> <p>8 am GAP & GMT</p> <p>Ad hoc EC</p>	<p>7 am State Delegations 7 am Secretariat</p>

Supplemental Attachment 4
June 2014
Agenda Item C.6.a

NATIONAL MARINE FISHERIES SERVICE REPORT --

NWFSC/SWFSC GROUND FISH EFH TASKING FOR SEPTEMBER COUNCIL MEETING

At its March 2014 meeting, the Council requested that the Northwest and Southwest Fisheries Science Centers investigate the question of groundfish essential fish habitat (EFH) effectiveness, accuracy, and completeness, in the best way possible within the next five months, using existing staff resources, and to present their findings in the advance Briefing Book for consideration at the September 2014 Council meeting. The attached table summarizes tasks and associated products being considered for the September meeting, referenced by Council Member or requester.

NWFSC/SWFSC Groundfish EFH Tasking for September Council Meeting

Council Member / Requester	Task	Products	Likely to be Available by Sept Council Meeting, Y/N
Dale Myer	Describe and analyze effects of gear changes (e.g. footrope regs), Analyze untrawlable habitat as proxy for closed areas	List of gear changes and list of key papers with short summary statements	Y
Dale Myer	Analyze how amendment 20 is affecting fishing (catch shares)	Analysis is part of the Amendment 20 Biological Opinion	scheduled for February
Dale Myer	Analyze if amendment 20 is positive effect for habitat (catch shares)	Analysis is part of the Amendment 20 Biological Opinion	scheduled for February
Dale Myer	Analyze effects of RCA	2 to 5 pager	Y
Dale Myer	Analyze whiting data within EFH Cons. Areas for bottom contact	Table of % of tows contacting the seafloor in closed vs. open areas by province and by depth	Y
Michelle Culver	Map of displaced or restored trawl effort that would result from proposals	GIS Layers and Maps that can be used in presentation to the Council	Y
Michelle Culver	What % of trawl effort would be displaced/restored by proposals AND What percentage of the area would be displaced or restored by the proposals?	Table with summary of the % of trawl effort displaced or restored by proposal by province by gear type	Y
Michelle Culver	What % of the catch composition in aggregate is in the proposed closed areas?	Table with summary as a percentage of aggregate catch (e.g., sharks, rockfishes, flatfishes, etc.) by proposal by province by gear type	Y
Michelle Culver	Identify overlap in spatial boundaries among proposals	GIS Layers and Maps that can be used in the presentation to the Council	Y

NWFSC/SWFSC Groundfish EFH Tasking for September Council Meeting

Council Member / Requester	Task	Products	Likely to be Available by Sept Council Meeting, Y/N
Michelle Culver	Map of proposed closures with overlay of tribal areas (North of 46-degrees 53' N lat to US-Canada border; shoreward of 125-degrees 44' W long.)	GIS Layers and Maps that can be used in the presentation to the Council	Y
Michelle Culver	Region should develop process options for implementation of new regs in 2016 and 2017. More specifically, she asked the Region to come back with 1 or 2 options for the Council to consider on process and timelines that the Council can use to backcalculate when they need to take action - i.e., when would the Council need to take final action for the regulations to be implemented by NMFS in 2016 or 2017?		NA
Michelle Culver	Map of displaced or restored fixed gear effort that would result from proposals	GIS Layers and Maps that can be used in presentation to the Council	?
Michelle Culver	What % of fixed gear effort would be displaced/restored by proposals AND What percentage of the area would be displaced or restored by the proposals?	Table with summary of the % of fixed gear effort displaced or restored by proposal by province	?
Dan Wolford	Focus on objective of maintaining healthy fish populations rather than protecting habitat for habitat's sake.	NEPA purpose and needs statement	NA

NWFSC/SWFSC Groundfish EFH Tasking for September Council Meeting

Council Member / Requester	Task	Products	Likely to be Available by Sept Council Meeting, Y/N
Dan Wolford	Cost/benefit of areas to protect habitat	See Culver tasks and NEPA	NA
Dan Wolford	Gather a team to conduct independent scientific review of status quo and proposals		NA
Dan Wolford	Develop criteria for analyzing proposals		NA
Rich Lincoln	Where do proposals intersect RCAs?	GIS Layers and Maps that can be used in the presentation to the Council	Y
Council Staff	List of areas (e.g., Potato Bank in So. Calif.), where inaccuracies exist in previous designations.		Y
Michelle Culver & David Sones	Summarize consultations, including acres protected	Table with narrative	Y

SUPPLEMENTAL GROUND FISH ADVISORY SUBPANEL REPORT ON FUTURE
COUNCIL MEETING AGENDA AND WORKLOAD PLANNING

The Groundfish Advisory Subpanel (GAP) was briefed by Mr. Brett Wiedoff on future council meeting agenda and workload planning. The GAP offers the following comments and recommendations.

The GAP finds it incredibly hard to comment in a meaningful way on future workload planning without having a better understanding of what resources will be available and what can realistically be done. We understand that National Marine Fisheries Service (NMFS) will be undertaking an assessment of its workload capacity and providing a report to the Council and advisory bodies. We strongly recommend that the report be made available in the September briefing book so that we have time to digest it in advance of the omnibus item on the September agenda.

The GAP would like to see the Council take final action on the electronic monitoring (EM) regulatory package in September. If that does not occur, it is the understanding of the GAP that due to Council workload, the timeline for implementation in 2016 could slip significantly.

PFMC
06/24/14

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT ON
FUTURE COUNCIL MEETING AGENDA AND WORKLOAD PLANNING

The Highly Migratory Species Advisory Subpanel (HMSAS) is concerned about a recent announcement to expand the national monument surrounding Johnson Island and six other islands and atolls in the Western Pacific Ocean. This is an exceptionally large area exceeding 782,000 square miles. Part of the U.S. commercial tuna fleet fishes in this area. This sustainable Federal fishery would be completely eliminated from the entire area due to the “non-extractive” nature of this Executive Order.

The HMSAS would appreciate the Council taking advantage of the proposed public comment period by voicing our concerns about this complete closure to all uses over such an incredibly large area of the Pacific Ocean without any due process at all. To do so the HMSAS recommends that the Council schedule this topic on a future Council meeting agenda so that comments on the proposed designation can be submitted.

PFMC
06/21/14

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT FUTURE COUNCIL MEETING AGENDA AND WORKLOAD PLANNING

The Highly Migratory Species Management Team (HMSMT) offers the following comments on the workload associated with Council decisions under HMS Agenda Items at the June meeting.

No workload for the HMSMT is associated with Agenda Item E.1, Update on Regulatory Matters and International Activities. The work to accomplish Council actions falls on Council and NMFS staffs. This includes drafting letters to the U.S. Section/delegations to the Inter American Tropical Tuna Commission (IATTC) and Western and Central Pacific Fisheries Commission (WCPFC) Northern Committee and completing rulemaking for the drift gillnet (DGN) fishery.

No workload before the September Council meeting falls on the HMSMT with respect to Agenda Item E.2, Drift Gillnet Fishery Transition Issues. The Council established a set of policy objectives that will likely engender additional work for the HMSMT over the medium and long term.

For Agenda Item E.3, Exempted Fishing Permit (EFP) Process, Council staff will draft and circulate a solicitation letter. The deadline for receipt of applications will be the September Briefing Book deadline (August 15). The HMSMT, Highly Migratory Advisory Subpanel (HMSAS) and Scientific and Statistical Committee (SSC) will be tasked with reviewing applications included in the Briefing Book. This is likely to occur leading up to and at the September Council meeting. Additional analysis from the HMSMT may be required for any proposals the Council adopts for final consideration at the November meeting.

The Council identified seven issues for further consideration under Agenda Item E.4, Initial Scoping of Biennial Specifications and Management Measures. Under the biennial process, the Council would adopt a range of alternatives for each identified issue at the September meeting. Developing ranges of alternatives and associated preliminary analysis for all these issue would involve substantial workload for the HMSMT. What the HMSMT could potentially accomplish for each of these issues is summarized below.

Issue 1: Reduce domestic recreational catch of Pacific bluefin tuna

The HMSMT will be able to complete preliminary analysis of methods to reduce the domestic recreational catch of bluefin tuna including assessing bag and possession limit alternatives based on Council direction.

Issue 2: Increase the transmission (ping) rate for Vessel Monitoring System units on vessels in the California swordfish drift gillnet fishery

With the help of the EC, the HMSMT will be able to describe alternatives that accomplish the enforcement goal. The HMSMT could also complete a very preliminary analytical comparison of the action alternative(s) to status quo.

Issue 3a: Management of the pelagic longline fishery: Achieve fishing opportunity comparable to the Hawaii shallow-set longline fishery for HMS permit holders using longline gear outside the Exclusive Economic Zone (EEZ)

The HMSMT may be able to provide a description of considerations needed to develop a regulatory amendment to address this issue. Moving to final Council action on this issue would involve substantial additional work that is unlikely to be completed within the time constraints of the biennial process.

Issue 3b: Management of the pelagic longline fishery: Authorize a pelagic longline fishery inside the EEZ, which is currently prohibited by the HMS FMP

The HMSMT may be able to provide a description of considerations needed to develop an FMP amendment to address this issue. Moving to final Council action on this issue would involve substantial additional work that is unlikely to be completed within the time constraints of the biennial process.

Issue 4: For the California drift gillnet (DGN) fishery, establish hard caps for high priority protected species (marine mammals and sea turtles) and measures to reduce discard of other species

The HMSMT could provide a summary of the practical and process issues associated with developing a range of alternatives for this issue, based on the policy direction motion under Agenda Item E.2. Moving to final Council action on this issue would involve substantial additional work that is unlikely to be completed within the time constraints of the biennial process.

Issue 5: Transition the current California limited entry permit program for DGN vessels to a Federal limited entry permit program under the HMS FMP

The HMSMT could provide a summary of the practical and process issues associated with developing a range of alternatives for this issue, based on the policy direction motion under Agenda Item E.2. Moving to final Council action on this issue would involve substantial additional work that is unlikely to be completed within the time constraints of the biennial process.

Issue 6: Establish a requirement for all DGN vessels to carry an observer or electronic monitoring system

The HMSMT could describe a range of alternatives for this issue and preliminary analysis of impacts of the alternatives.

Summary Workload Assessment

In the short term (between now and the remaining September – November Council meeting portion of biennial process) the HMSMT cannot complete all tasks associated with Council action under Agenda Items E.3 and E.4 at the June meeting. The HMSMT can review any EFP proposals submitted for the September meeting, provide information that would allow for future work planning on Issues 3-6, and focus work on Issues 1 and 2 sufficient for them to be completed in this biennial management cycle.

PFMC
06/25/14