

FUTURE COUNCIL MEETING AGENDA PLANNING

The primary purpose of this agenda item is to provide initial information to Council Members early in the Council meeting to facilitate planning for future meeting agendas.

The Executive Director will review initial drafts of the three-meeting outlook and the March Council meeting agenda, and respond to any questions the Council may have regarding these initial planning documents. While this agenda item is essentially informational in nature, after hearing any reports and comments from advisory bodies or the public, the Council may wish to provide guidance to the staff on any preparations for Agenda Item B.6 at which time final consideration of the draft March agenda is scheduled.

The proposed March agenda tries to maintain Monday free for advisory body deliberations.

Council Tasks:

- 1. Receive information on potential agenda topics for the next three Council meetings.**
- 2. Receive information on an initial draft agenda for the March Council meeting.**
- 3. Provide guidance on the development of materials for Agenda Item B.6 (March agenda and three-meeting outlook).**

Reference Materials:

1. Agenda Item B.1.a, Attachment 1: Preliminary Draft Three-Meeting Outlook for the Pacific Council.
2. Agenda Item B.1.a, Attachment 2: Preliminary Proposed Council Meeting Agenda, March 4-9, 2007, Sacramento, California.
3. Agenda Item B.1.b, RecFIN Report
4. Agenda Item B.1.d, Public Comment.

Agenda Order:

- a. Agenda Item Overview
- b. Agency Reports
- c. Reports and Comments of Advisory Bodies
- d. Public Comment
- e. Council Discussion of Future Council Meeting Agenda Topics

Don McIsaac

PFMC
10/26/06

Preliminary Three Meeting Outlook for the Pacific Council

(Contingent Items are Shaded and Counted in Time Estimate)

March Sacramento, CA 3/4-3/9/2007 Estimated Percent of Standard Floor Time = 116%	April Seattle, WA 4/1-4/6/2007 Estimated Percent of Standard Floor Time = 95%	June Foster City, CA 6/10-6/17/07 Estimated Percent of Standard Floor Time = 95%
<u>Administrative</u> Closed Session; Open Session Call to Order; Min. Legislative Committee Report <u>Fiscal Matters</u> Interim Appointments to Advisory Bodies 3 Mtg Outlook, Draft April Agenda, Workload Public Comment on Non-Agenda Items <u>Coastal Pelagic Species</u> NMFS Rpt Pacific Mackerel: Consider Need for Mop-up Fishery STAR Panel Terms of Ref.: Adopt final <u>Enforcement Issues</u> USCG Annual Fishery Enforcement Report <u>Groundfish</u> NMFS Report 2007 Inseason Management (1 Session) Pac. Whiting: Adopt Final 2007 Spx & Mgmt Measures B ₀ Workshop Report Trawl IQ: Refinement of Alternatives <u>Habitat Issues</u> Habitat Committee Report <u>Highly Migratory Species</u>	<u>Administrative</u> Closed Session; Open Session Call to Order; Min. Legislative Committee Report Interim Appointments to Advisory Bodies Regulatory Streamlining ROA: Review Draft Agreement 3 Mtg Outlook, Draft June Agenda, Workload Public Comment on Non-Agenda Items Res. & Data Needs: Set Process for Next Cycle <u>Coastal Pelagic Species</u> <u>Enforcement Issues</u> State Activity Rpt--CDFG <u>Groundfish</u> NMFS Report 2007 Inseason Management (2 Sessions) Open Access Limitation: Next Steps Intersector Allocation EIS: Refinement of Preliminary Alts. FMP A-15 (AFA): Mgmt Alts for Analysis & Public Review <u>Habitat Issues</u> Habitat Committee Report <u>Highly Migratory Species</u>	<u>Administrative</u> Closed Session; Open Session Call to Order; Min. Legislative Committee Report <u>Fiscal Matters</u> Interim Appointments to Advisory Bodies 3 Mtg Outlook, Draft September Agenda, Workload Public Comment on Non-Agenda Items <u>Coastal Pelagic Species</u> NMFS Rpt Pacific Mackerel Harvest Guideline for 2007-2008 <u>Enforcement Issues</u> <u>Groundfish</u> NMFS Report 2007 Inseason Mgmt (2 Sessions) Open Access Limitation: Next Steps Trawl IQ: Further Refinement of Alts. (if Necessary) Intersector Allocation EIS: Adopt Alts. for Prelim. Analysis FMP A-15 (AFA): Final Council Action Nature Conservancy Prop. to Add EFH & Gear Switching <u>Habitat Issues</u> Habitat Committee Report <u>Highly Migratory Species</u>

Agenda Item B.1.a
 Attachment 1
 November 2006

Preliminary Three Meeting Outlook for the Pacific Council
(Contingent Items are Shaded and Counted in Time Estimate)

March Sacramento, CA 3/4-3/9/2007 Estimated Percent of Standard Floor Time = 116%	April Seattle, WA 4/1-4/6/2007 Estimated Percent of Standard Floor Time = 95%	June Foster City, CA 6/10-6/17/07 Estimated Percent of Standard Floor Time = 95%
NMFS Rpt	NMFS Rpt	NMFS Rpt
EFPs for 2007: Approve DGN Alts. & EA for Pub Review & Adopt Final Preferred Alt. for Longline EFP	EFPs for 2007: Adopt Preferred Alt. for DGN EFP	EFPs for 2008: Adopt for Pub Rev
Reference Points for OF Determinations		Ref. Points for OF Determinations: Adopt Alts for Pub Rev
<u>Marine Protected Areas</u>	<u>Marine Protected Areas</u>	<u>Marine Protected Areas</u>
<u>Pacific Halibut</u>	<u>Pacific Halibut</u>	<u>Pacific Halibut</u>
Rpt on IPhC Annual Mtg Incidental Catch Regs for 2007: Adopt Options for Public Rev	Incidental Catch Regs for 2007: Adopt Final	
<u>Salmon</u>	<u>Salmon</u>	<u>Salmon</u>
2007 Mgmt Options: Adopt Range for Public Rev & Appt. Hearings Officers Inseason Mgmt: Review and Consider Recommending any Necessary Inseason Mgmt Changes Identify Stocks not Meeting Conserv. Objectives	2007 Management Options: Final Adoption 2007 Methodology Review: Establish Process & Preliminary Priorities	
Mass Marking & CWT Information Briefing		
<u>Information Reports</u>	<u>Information Reports</u>	<u>Information Reports</u>
		Salmon Fishery Update
<u>Special Sessions</u>	<u>Special Sessions</u>	<u>Special Sessions</u>

PRELIMINARY PROPOSED COUNCIL MEETING AGENDA, MARCH 4-9, 2007, SACRAMENTO, CA

	Sun, Mar 4	Mon, Mar 5	Tues, Mar 6	Wed, Mar 7	Thurs, Mar 8	Fri, Mar 9
Day-Time Council Floor Matters	3:00 pm KFMC?	<u>CLOSED SESSION</u> 2:00 pm <u>CALL TO ORDER</u> 3:00 pm <u>ENFORCEMENT ISSUES</u> B. 1 USCG Fishery Enforcement Rpt (1 hr) <u>OPEN PUBLIC COMMENT</u> (1 hr)	<u>ADMINISTRATIVE</u> C.1 Future Agenda Planning (15 min) <u>PACIFIC HALIBUT</u> D.1 Rpt on IPHC (15 min) D.2 Incidental Catch Options for Salmon Troll & Sablefish (30 min) <u>SALMON</u> E.1 Stocks not meeting Conservation Obj. (1 hr) E.2 Inseason Mgmt (1 hr) E.3 Rev 2005 Fisheries & 2006 Abundance Est. (1 hr) E.4 Identify Prelim Mgmt Options (3 hr) <u>HABITAT</u> F.1 Current Issues (45 min)	<u>COASTAL PELAGIC SPECIES</u> G.1 NMFS Rpt (30 Min) G.2 Mackerel Mop-up Fishery (30 min) G.3 Final STAR TOR (1 hr) <u>GROUNDFISH</u> H.1 NMFS Report (30 min) H.2 Pac Whiting Spx for 2007 (3 hr) H.3 Inseason Adjustments (2 hr) <u>SALMON</u> E.5 Adopt Options for Analysis (2 hr)	<u>GROUNDFISH</u> H.4 TIQ Refine Alts. (6 hr) H.5 B ₀ Workshop Rpt (1 hr) <u>SALMON</u> E.6 Mass Marking & CWT Update (1 hr) E.7 Mgmt Option Direction (if Nec) (45 min)	<u>HIGHLY MIGRATORY SPECIES</u> I.1 NMFS Report (30 min) I.2 EFPs-- DGN Pub Rev Alts & Final Long Line-- (2 hr) I.3 Refine Bio Ref Pts (1 hr) <u>ADMINISTRATIVE</u> C.2 Minutes (15 min) C.3 Legislative (30 min) C.4 Fiscal (30 min) C.5 Interim Appointments (30 min) C.6 3-Meeting Outlook, Draft March Agenda (45 min) <u>SALMON</u> E.8 Adopt 2007 Mgmt Options (2 hr 30 min) E.9 Appoint Hearing Officers (15 min)
		3 hr	7 hr 45 min	9 hr 30 min	8 hr 45 min	8 hr 45 min
Evening			6:00 pm Council Chair's Reception			
Committees		8:00 am GAP 8:00 am GMT 8:00 am HC 8:00 am SAS 8:00 am STT 8:00 am SSC 9:00 am Leg Cmte 10:00 am BC 5:30 pm EC	8:00 am EC 8:00 am GAP 8:00 am GMT 8:00 am SAS 8:00 am STT 8:00 am SSC	8:00 am EC 8:00 am GAP 8:00 am GMT 8:00 am SAS 8:00 am STT	8:00 am EC 8:00 am GAP 8:00 am GMT 8:00 am SAS 8:00 am STT	8:00 am EC 8:00 am STT 8:00 am SAS

**RecFIN Operations
Informational Report**
To
Pacific Fishery Management Council
October 25, 2006

The RecFIN Technical Committee would like to advise the Council on a number of activities the Committee and its Subcommittees have been working on during 2006. It is our hope to make a presentation at the March Council meeting addressing these issues in greater detail. We would request direction from the Council and/or its Management Teams, Advisory Panels and the Scientific and Statistical Committee on a number of recreational data and sampling items.

The main issues we plan to address in March are as follows: a) review of the RecFIN Workshop held August 28-31, 2006 in Portland, Oregon and a status of its recommendations; b) a review of recreational data elements collected in the field sampling programs compared to the lists of desired elements submitted by the PPMC's GMT and SSC, and stock assessment biologists; c) a proposal from RecFIN on procedures to handle average weights by species for conversion of landings to metric tons; d) procedures for recording discards in the three states and applying mortality rates to them for the discard component of total recreational harvest by species; e) a proposal to manage recreation catch by numbers of fish in place of metric tons; f) a presentation on the comparison study of effort estimates between the current RecFIN sampling programs and the historic Marine Recreational Fisheries Statistics Survey (MRFSS) so as to better interpret historic landings in the RecFIN database; and g) review of the National Research Council Report on recreational sampling methods and the current and planned responses to their recommendations.

The RecFIN Technical Committee held its fall meeting on October 18-19, 2006 and addressed a plan for presenting the above items to the Council in March, 2007. As a prelude to these presentations, the following brief information is provided on these issues:

RecFIN Workshop: Fifty people attended the RecFIN Workshop in August, 2006 in Portland, OR. The methods for the five state sampling programs for recreational fisheries in California, Oregon and Washington were presented and discussed over a day and a half. A presentation from Alaska on their recreational sampling programs was also included. In the next two days, the workshop discussed the data elements requested by management entities with those collected in the various sampling programs. It was decided these should be

presented in a tabular form by RecFIN to better visualize the differences. Discussions also took place on how discarded fish are tallied and how average weights are generated by the states and RecFIN (for fish that are not observed) to determine metric tons landed. The recommendations from the National Research Council (NRC) Report on recreational sampling methods were discussed and Pacific Coast responses to each item were formulated. The RecFIN Technical Committee will follow up on recommendations and discussions from the Workshop to consider changes to procedures and/or data collected and how it is processed.

Recreational Data Elements: The recreational data elements presented by the PFMF's GMT and SSC and those of the stock assessment biologists were discussed at the RecFIN Workshop. The RecFIN Technical Committee also discussed these at their October meeting and will prepare a spreadsheet in the next month to better analyze any differences or gaps in these lists. The result of this comparison will be discussed in our March , 2007 report.

Average Weight Computations: The average weight computation methods were discussed at the RecFIN Workshop as well as the October RecFIN Technical Committee meeting. The primary challenge is determination of an appropriate average weight for discarded fish that are not observed as to exact species or size. Methods employed by the various state sampling programs will be discussed in our March report. It is the desire of RecFIN to standardize this as much as possible between the various state sampling programs.

Recording Discards: The methods used in the three states to tally discarded fish in the sampling programs were presented at the RecFIN Workshop and discussed again at the October RecFIN Technical Committee meeting. Again, it is the desire of RecFIN to standardize these methods as much as possible in the various state sampling programs. The current PFMF GMT procedure is to apply mortality rates to discarded fish. In March RecFIN will propose standardizing discards in the various sampling programs and mortality rates for non-managed species to make the program currently used consistent between all states in the database. We will request endorsement of recommended changes to our proposal from the Council and its entities.

Managing by Numbers: The RecFIN workshop and the RecFIN Technical Committee discussed proposing using numbers of fish for the recreational catch quotas set by the Council. We will address this in our March report. In very brief terms it would entail converting the metric ton allocation for the recreational fishery to numbers of fish by using an average weight by species from past data to convert to numbers of fish. The monthly catch estimates would be reported in numbers and an average weight from that months sampled fish

compared to the one used to convert the MT allocations to numbers of fish to assure it is tracking close to the average weight used for the conversion.

Current RecFIN/MRFSS Effort Comparisons: As the Council is aware, when we changed sampling methods in mid-2003 and 2004 in the three states, NMFS continued to conduct the MRFSS household telephone survey on the Pacific coast so that an analysis of the historic MRFSS estimation procedures could be compared to the current sampling program effort estimations. The purpose of this duplication was to see how best to interpret historic landings data in RecFIN database back to 1980 with the current sampling methods and estimates. The RecFIN Statistical Subcommittee has been working for some time on this comparison in an effort to determine the many various comparisons that would be made and waiting to obtain at least a couple of years of data for the comparison. This report will be completed sometime in 2007. We hope to have specific data concerning its status in our March, 2007 report to the Council.

National Research Council Report: The NRC report - *"Review of Recreational Fisheries Survey Methods"* was published in June, 2006. A summary of the reports recommendations was discussed at the RecFIN Workshop. A Pacific coast response to the recommendations in relation to the three states sampling programs was formulated at the RecFIN Workshop. This summary was taken to a meeting in Denver, Colorado the week following the workshop. The meeting was sponsored by NMFS as the first of a number of meetings to address the recommendations from the NRC report. This first meeting mainly brought managers and scientists together to lay out a plan for reviewing the recommendations and involving managers, scientists, and fishermen in the review process. The three Interstate Commission directors are serving with NMFS personnel on a steering committee to focus the future meetings to address sampling changes and outreach concerning the recommendations from the report and involve all participants in the various working groups. RecFIN and the Pacific coast position is that any work should be regionally focused to appropriate issues of specific local sampling programs. Additional information on this process and the various working groups to be established will be presented in our March report to the Council.

Russell Porter
RecFIN Technical Committee Chairman
Pacific States Marine Fisheries Commission

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON FUTURE COUNCIL MEETING AGENDA PLANNING

The Highly Migratory Species Management Team (HMSMT) reviewed the Council's priority list of HMS management issues, and discussed our workload and the timing of the issues to be addressed. The HMSMT had its initial meeting with the Highly Migratory Species Advisory Subpanel (HMSAS) to review albacore catch and effort data in response to the Inter-American Tropical Tuna Commission (IATTC) Resolution C-05-02, and proposes we have another joint meeting to continue discussions on albacore prior to the Council's March 2007 meeting (tentatively scheduled for February 6-7, 2007).

A number of issues concerning the estimation of U.S. north Pacific albacore effort were discussed at the joint HMSMT/HMSAS meeting earlier this month, including questions about what time period should be used to characterize recent effort, whether any fisheries which catch albacore should be excluded from consideration, what type of model might be used to standardize effort across the various gears, and how a "band" of effort might be used to better reflect environmental conditions, economic fluctuations or other variable factors which affect effort. The Southwest Fisheries Science Center staff plans to use the best available north Pacific albacore catch and effort data to develop alternative approaches for presentation to the HMSMT and HMSAS at our proposed joint meeting in February of 2007.

With regard to the Council's current three-meeting outlook, the timing of the issues, and the processes associated with addressing them, the HMSMT proposes this revised outlook:

Council Meeting	Routine Management Measures	Exempted Fishing Permits (EFPs)	Management Issues
March 2007		Present final report on drift gillnet EFP; identify EFP modifications (if any) (preliminary action) Present draft environmental assessment (EA) for shallow set longline EFP (final action)	HMSMT and HMSAS update on U.S. north Pacific albacore effort (guidance)
April 2007		Present draft EA for drift gillnet EFP (final action)	
June 2007	Provide final management measures and draft EA for proposed drift gillnet turtle closure boundary (final action) Present draft 2006 SAFE	Consider EFP applications for 2008 (preliminary action)	Present alternatives to address yellowfin tuna overfishing (preliminary action)

HMSMT Recommendations:

1. Approve the proposed joint HMSMT/HMSAS meeting between November and March (tentatively scheduled for February 6-7, 2007); and

2. Provide guidance to the HMSMT on HMS workload priorities and the proposed schedule.

PFMC
11/13/06

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT ON FUTURE
COUNCIL MEETING AGENDA PLANNING

The Highly Migratory Species Advisory Subpanel (HMSAS) requests that the albacore effort characterization issue be placed on the March 2007 Council agenda.

Albacore fishermen have seen a marked increase of net-marked fish. For that reason the HMSAS would like the Enforcement Consultants (EC) to prepare a report on IUU (illegal, unregulated, and unreported) fisheries intercepting highly migratory species and for the EC to brief the HMSAS and the Council on the scope of the problem and current enforcement efforts.

PFMC
10/08/06

The Central California Coast Sustainable Groundfish Plan

Discussion Draft: 10/16/06

Contact: Rod Fujita, Environmental Defense
Chuck Cook, The Nature Conservancy

GOAL – Create a groundfish fishery that can sustain fishermen, communities and productive fisheries resources long into the future as a pilot program for the central California coast.

OBJECTIVES

1. Further reduce trawling effort in waters within the project area (off the Central California Coast (from Point Conception to Davenport, California)
2. Establish additional no-trawl zones to protect areas of high conservation value within the project area
3. Transform trawl effort into fishing effort that significantly reduces habitat impacts and bycatch/discards
4. Monitor the outcomes and implement adaptive management
5. Expand successful elements of the pilot program to other areas or to the west coast groundfish fishery in general

IMPETUS – Increasingly stringent regulations are making it harder for groundfish fishermen to access fish, plan a business and make a living. At the same time, there is a need to protect Essential Fish Habitat from the impacts of bottom trawling and to reduce bycatch/discards. Fishermen and conservationists on the central California coast have come together with a solution. These fishermen are willing to accept strict habitat protections and gear modifications in exchange for more stable and predictable access to fish resources.

THE PLAN – The Nature Conservancy will lease back some or all of the trawl permits it has purchased to fishermen on the central California Coast on condition that these fishermen will use gears that have lower bycatch and less impact on habitat (i.e. Scottish Seine, fish traps, vertical long lines). The plan includes 5 main points:

1. TNC will purchase additional trawl permits in central California, particularly in Monterey and Half Moon Bay
2. Designate additional areas as no-trawl zones in the northern portion of the project area (from Point Sur to Davenport) while carefully leaving areas that are critical for sustaining the fishery open
3. Lease back trawl permits to fishermen with a gear-switching provision
4. Bank a portion of the TNC trawl permit trip limits for conservation of depleted species and/or to preserve access for the rest of the fleet
5. Improve stewardship and monitoring within the project area
6. Expand successful elements of the pilot project to other regions or to the west coast groundfish fishery as a whole

WHAT WE ARE SEEKING – We seek to identify a relatively expedited pathway for achieving the plan outlined above, specifically in regards to allowing these trawl permits to fish using different gears. Time is of the essence due to the urgent need for fishing-related revenues in central California ports and because pending buyout deals may dissolve if too much time elapses. We seek guidance from the Groundfish Management Team to create a successful proposal for the November Council Meeting.

OPTIONS FOR IMPLEMENTING GEAR SWITCHING

1. **SHORT TERM** – prepare an Exempted Fishing Permit application with full observer coverage (with costs and fundraising obligations assumed by TNC/ED) that would allow TNC/ED to lease trawl permits to fishermen living in San Luis Obispo, Monterey, and San Mateo Counties willing to fish them with gear and practices anticipated to result in substantially less habitat impact and bycatch than trawl gear (e.g., hook and line, pots). In addition to creating new fishing opportunities in the project area by allowing the trawl permits held by TNC to be fished sustainably, the EFP would increase information on fixed gear fishing, enhance observer coverage, and limit catch of depleted species to meet or underfish caps in the project area.
2. **LONGER TERM**
 - Management sector/cooperative - Allocate trip limits for select species (e.g. sablefish, dover sole, English sole, and depleted species) to The Nature Conservancy or some other acceptable entity which would function as a sector or cooperative. The allocations could be based on the existing trawl permits/catch history and allocated on a yearly basis. TNC would in turn lease some of those allocations to fishermen on the central coast of California. The “sector/cooperative” would then be responsible for managing its total allocation and must stop fishing when limits are reached. The fish represented by the unfished trip limits can then be returned to the trawl fleet or be banked for conservation purposes. (Note – this is very similar to the Cape Cod hook and line sector and the newly created New England gillnet sector, both designed by the CCCHFA. We can work with CCCHFA to develop guidelines that will work in CA.)
 - There is a concern about how the new sector would interact with existing management. Specifically, because the current management model is based on historical vessel usage and behavior, it will not be as simple as taking the trip limit for select species (i.e. sablefish) and allocating as that could result in significantly increased effort and fishing mortality. However, taking only a portion of the allowable trip limit may be acceptable (i.e. banking some of the trip limit and leasing back some).
 - Create dual gear endorsement permits to allow fishermen to lease trawl permits from TNC and fish them using fixed gear. Fish caught under these permits would be attributed to the trawl trip limits associated with the permits.

- Move the sablefish allocation line north of the project area to alleviate difficulties associated with allocating sablefish and harmonizing regulations throughout the project area
- Give the TNC trawl permits their own sablefish tier and then develop a way to manage the catch of untargeted species, such as bycatch caps

RESPONSES TO POTENTIAL CONCERNS

1. **What is the regulatory and management framework that would encompass gear-switching?** Over the short-term (as in the case of our proposed pilot project) an Exempted Fishing Permit may provide a mechanism to allow gear-switching in the project area. Such an EFP is currently under development (draft is attached). Over the longer-term, for the entire fleet, gear-switching could be embodied within the trawl IFQ program (it is one of the options being analyzed), developed as part of the biennial process, and/or developed as an FMP amendment. The pilot project would remain under the purview of the existing limited entry program.
2. **Is this proposal fair to existing fixed gear permittees?** In the past, some longliners have asked to switch to pots, but have been turned down. Arguably, there is a larger public trust benefit associated with allowing trawlers to switch to fixed gear than there would be in allowing longliners to switch to pots. In addition, a successful demonstration of gear switching in our pilot project would be expected to result in further regulatory change that would apply to all sectors, making the sectors more flexible to optimize yield and revenue.
3. **What permits will be affected?**
Only permits owned by TNC.
4. **Who will be eligible for leaseback?**
This is still to be determined. Preference will be given to fishermen who sold permits to TNC and others who live in those central California coastal counties.
5. **What area will be affected?**
Just the central California coast
6. **What about fees paid for the industry-funded buyback?**
Fishermen who lease back quota will continue to pay fees on landed fish as part of the buyback repayment.
7. **What will be the impact on the resource?**
By switching to a gear that is more discriminate in its harvesting method, bycatch and discards will be reduced, as will impacts on bottom habitats. Pending Council approval, additional areas will be closed to trawling either through the EFH process or (preferably) through an expedited regulatory process. Additionally, TNC is only seeking to lease back a portion of the trip limits represented by the permits for harvest by fishermen. The rest of the fish may be leased back to the trawl fleet or held in a conservation bank to protect depleted species, accelerate rebuilding, protect species in the precautionary management zone such as sablefish, etc.
8. **How will existing trawlers be affected?**

The scope and scale of this project is small to begin with. Trawlers who do not regularly fish in central California waters will likely be minimally impacted, if at all. Trawlers may benefit from having a portion of the fleet operating in a manner that has relatively reduced harvest and bycatch. This can have immediate positive impact on trawler access to fish and may lead to faster rebuilding of depleted stocks. In addition, a portion of the TNC permit trip limits may be leased back to the fleet at large. If the pilot is successful and attractive, it can be expanded to the rest of the trawl fleet.

Central California Sustainable Groundfish Plan Proposal

Contact: **Rod Fujita, Environmental Defense**
 Chuck Cook, The Nature Conservancy

Map of Project Area and Proposed Additional No Trawl Zones in the Central Coast Project Area

TNC and ED are currently negotiating the boundaries of three additional No Trawl Zones that will be proposed to the PFMC for closure to bottom trawling in the Central Coast project area. We are working with the PFMC and the trawlers who fish these grounds to secure their acquiescence in the creation of these additional No-Trawl Zones in exchange for the Conservancy's purchase of more trawling permits and/or vessels. In cooperation with regional scientists and commercial fishermen, we are working to provide protection of essential fish habitat in three additional areas within the Monterey Bay National Marine Sanctuary: Pioneer Shelf and Slope, Smooth Ridge, and Point Sur Bank. The Central Coast Trawl Project Area and study areas being discussed for potential additional No Trawl Zones are provided in Figure 1.

The Central Coast Trawl Project Area in California has high marine biodiversity due to the high bathymetric complexity and the diversity of shelf, slope, and canyon habitats. TNC has identified, through a peer-reviewed marine ecoregional assessment, areas of biodiversity importance in the central California region that warrant additional protections (TNC 2006). Based on habitat suitability modeling for groundfish and trawl survey data (NOAA 2004, NMFS 2005), the areas identified for proposed additional no-trawl zones provide essential fish habitat for groundfish and are hotspots for demersal fish diversity.

In the region from Point Conception, California to the Oregon border, only 9% of the area being protected in EFH No-Trawl Zones established in June 2006 in federal waters is on the continental shelf (<200m depth), while 91% of the existing No Trawl Zones are on the slope (>200m depth), most of which is outside the trawling "footprint" where trawling is frequent.

The three areas that will be proposed for additional protection have been extensively trawled in recent years and represent an opportunity to significantly reduce impacts to seafloor habitat and monitor the potential recovery of benthic communities over time. These areas are all close to major marine research institutions (such as Monterey Bay Aquarium Research Institute, Moss Landing Marine Laboratory, University of California Santa Cruz, and the National Marine Fisheries Service Santa Cruz Laboratory) that have the capacity to conduct long-term monitoring.

Study Area 1: Pioneer Shelf and Slope

This area includes slope and shelf habitat offshore from Half Moon Bay and the productive upwelling center at Ano Nuevo – Davenport, where the continental shelf is broad. Much of this area is along the shelf-slope break and has been included in the

Rockfish Conservation Area. The area includes the heads of 4 submarine canyons. Pioneer Canyon is a large canyon offshore from the Golden Gate that cuts across the continental slope and has its head in approximately 200m of water on the continental shelf. Ascension Canyon and Ano Nuevo Canyon are just offshore of the Ano Nuevo – Davenport upwelling center. Another large unnamed canyon occurs further offshore between Ascension and Pioneer canyons. Canyon heads and large canyons are areas of relatively high biodiversity due to their bathymetric complexity and rapid depth changes that bring shallow and deep water faunal assemblages in close proximity to one another. This area, especially along the shelf-slope break, is in the top 20th percentile of areas surveyed for seabird diversity and demersal fish density and diversity (NOAA 2004).

Study Area 2: Smooth Ridge

The Smooth Ridge area includes extensive shelf and slope habitat on the northern side of Monterey and Soquel submarine canyons and is bisected by the shelf-slope break. The area is dominated by soft-bottom habitat but also includes hard bottom habitat along the margins of Soquel and Cabrillo canyons and the near-shore areas off Santa Cruz. The head of Cabrillo canyon is included in this area.

This area in the northern part of Monterey Bay receives upwelled water advected south from the Davenport upwelling center and is a diversity hotspot for seabirds, cetaceans, and demersal fish (NOAA 2004). The northwestern corner of Monterey Bay at the shelf-slope break is a diversity hotspot for benthic invertebrates and the general area is rich with brachypod beds. The shelf habitat on the north side of Monterey Canyon encompasses one of the largest fish density and seabird density hot spots in the area surveyed (NOAA 2004).

The Smooth Ridge area in Monterey Bay also overlaps extensively with the project area that the MBNMS recently assessed in an EIS for the laying of Monterey Bay Aquarium Research Institute's (MBARI) Monterey Accelerated Research System (MARS) cable. While the cable will be mostly buried in sediment along its route, protection of this area from extensive trawling would minimize potential damage to the research system. This proposed No-Trawl Zone includes much of the MARS cable route to its shoreward anchor near the head of Monterey Canyon off Moss Landing and the science instrumentation zone on Smooth Ridge. Marine resources in the cable project area have been characterized in the EIS documentation (<http://montereybay.noaa.gov/new/2005/031505marseir.html>). Based on the literature reviews and surveys conducted for the EIS, flatfish and rockfish are abundant in this area. Infaunal and epibenthic species in this area are typical for the central coast and include polychaetes, gastropods, echinoderms, cup corals, vase sponges, etc. High relief rocky substrate is present intermittently along the cable route, which is predominantly soft-bottom substrate.

Study Area 3: Pt. Sur Bank

The area of Point Sur Bank near two established No Trawl Zones (the Point Sur- Sur Canyon closure and the Pt. Sur Deep closure) is also being discussed. This area includes

shelf and slope habitats and the shelf-slope break, and is an area of high fish diversity (NOAA 2004). The shelf is broad in this area, relative to the Big Sur coast, and includes a large expanse of hard bottom habitat. The area directly off of Pt. Sur is a major upwelling zone (the largest upwelling center on the central coast) and offshore jets of upwelled, nutrient rich water extend offshore for many kilometers fueling a productive ecosystem that is characterized as having high seabird and demersal fish diversity (NOAA 2004).

REFERENCES

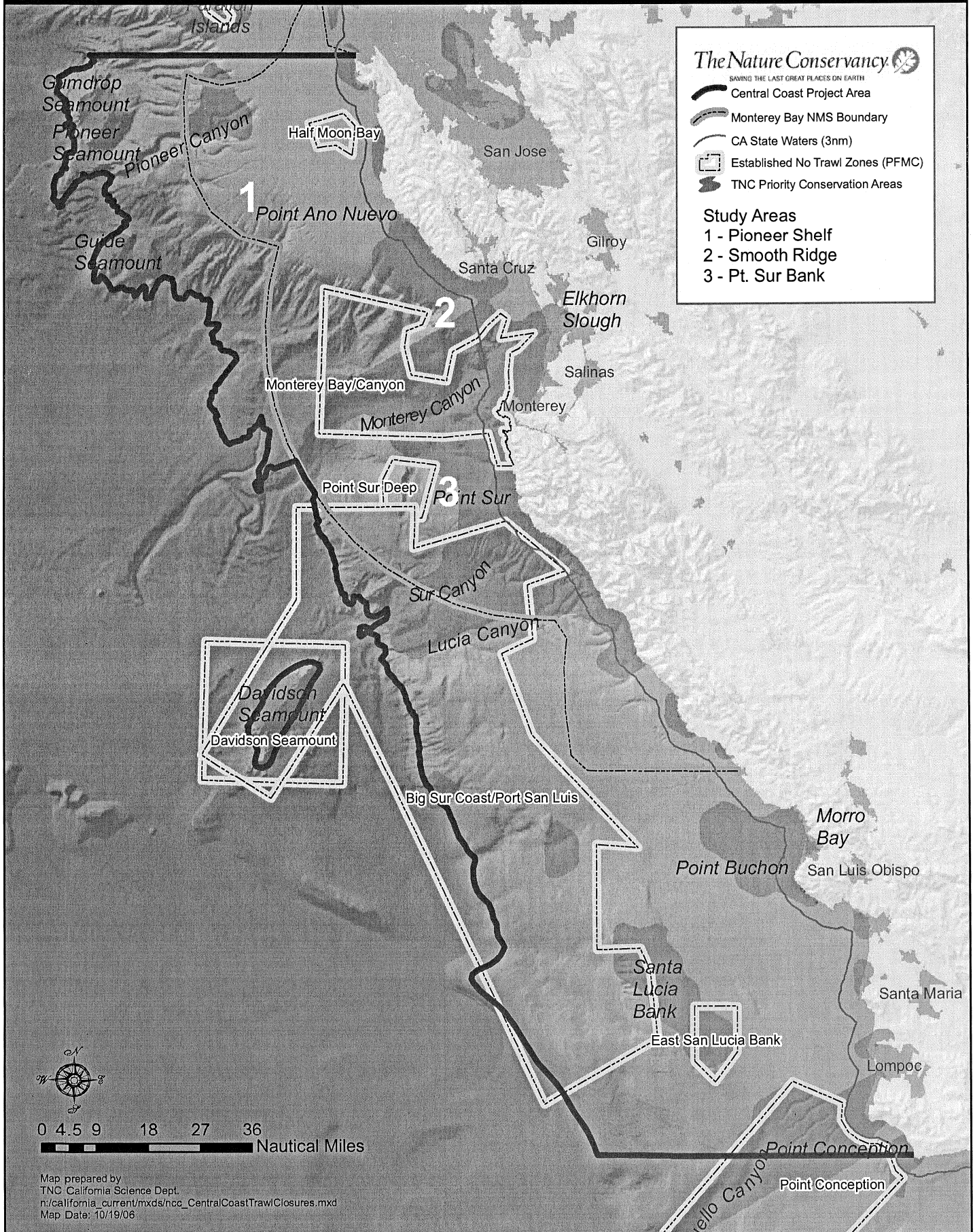
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Central Coast Project Area



UPDATED RESEARCH AND DATA NEEDS

The Pacific Fishery Management Council (Council) continually identifies research and data needs across its fishery management plans (FMPs) through a variety of processes, including stock assessment and fishery management cycles. Council Operating Procedure (COP) 12 outlines the Council's process for documenting research and data needs, updating the West Coast Fisheries Economic Data Plan, and the schedule for completing and communicating these needs to organizations which may be able to support additional research. COP 12 recommends the Council complete this process on a biennial cycle "to the extent possible within its workload priorities." The schedule for this process is designed to begin in an odd numbered year with a draft document for review by the Scientific and Statistical Committee (SSC) in April of the following even year and culminates with Council final approval in September and transmittal in December.

The Council last updated its Research and Data Needs document and the West Coast Fisheries Economic Data Plan in 2000 for the years 2000-2002. Due to heavy workload, this process was tabled in 2004. In 2006, although the Council's workload remains high, the Council directed the SSC to draft an abbreviated documentation of the Council's research and data needs that remain from the 2000 process and identify priority items that have emerged since then.

The SSC discussed a revised schedule for the 2006 process and assigned each SSC Subcommittee Chair the task of reviewing and compiling recent research and data needs that: (1) describe the current status of the highest priority needs for an FMP as identified in the Executive Summary of the Research and Data Needs 2000-2002 document, (2) address continuing issues, and (3) identify important emerging issues not covered in the 2000 document. In addition to the existing sections on groundfish, salmon, coastal pelagic species, and marine reserves, a new section was created for the relatively new FMP for Highly Migratory Species and the marine reserves section was expanded to include emerging issues associated with ecosystem based fishery management.

The Council reviewed the resulting draft summary documentation at its September 2006 meeting, considered comments from its advisory bodies and the public, and approved a public review draft of the document, *Research and Data Needs, 2006-2008* (Agenda Item B.2.a, Attachment 1). This document is posted on the Council web site. At its November 2006 meeting, the Council is scheduled to adopt final recommendations and approve the document for distribution. If the Council approves a final document at its November 2006 meeting, these research and data needs will be submitted in December 2006 to various organizations which may be able to provide support in their achievement, such as the National Marine Fisheries Service West Coast Regional Offices and Science Centers, West Coast States, Pacific States Marine Fisheries Commission, and National and West Coast Sea Grant Institutions.

Council Action:

Adopt Final Recommendations on the Research and Data Needs, 2006-2008 Document and Approve for Distribution.

Reference Materials:

1. Agenda Item B.2.a, Attachment 1: Research and Data Needs, 2006-2008, Public Review Draft.
2. Agenda Item B.2.b, Coastal Pelagic Species Management Team Report.
3. Agenda Item B.2.b, Coastal Pelagic Species Advisory Subpanel Report.

Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies
- c. Public Comment
- d. **Council Action:** Adopt Final Recommendations

Mike Burner

PFMC
10/24/06

RESEARCH AND DATA NEEDS

2006-2008

PUBLIC REVIEW DRAFT

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1.0 INTRODUCTION

The Pacific Fishery Management Council (Council) continually identifies research and data needs across its fishery management plans (FMPS) through a variety of processes, including stock assessment and fishery management cycles. Council Operating Procedure (COP) 12 outlines the Council's process for documenting research and data needs, updating the West Coast Fisheries Economic Data Plan, and the schedule for completing and communicating these needs to organizations which may be able to support additional research. COP 12 recommends the Council complete this process on a biennial cycle "to the extent possible within its workload priorities." The schedule for this process is designed to begin in an odd numbered year with a draft document for review by the Scientific and Statistical Committee (SSC) in April of the following even year and culminates with Council final approval in September and transmittal in December.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) include directives to 1) prevent overfishing, 2) rebuild depressed fish stocks to levels of abundance that produce MSY, 3) develop standardized reporting methodologies to assess the amount and type of bycatch, 4) adopt measures that minimize bycatch and bycatch mortality, to the extent practicable, 5) describe and identify essential fish habitat (EFH), and 6) assess the impact of human activities, including fishing impacts, on habitat. The MSA also encourages the participation of the fishing industry in fishery research. Additionally, Standard 8 mandates consideration of effects of fishery management measures on communities. These directives require substantial data collection and research efforts to support Council management of West Coast fisheries.

1.1 Public Review Process

This draft document is intended to provide the Council, its advisory bodies, Federal and State entities, and the public the opportunity to review and provide comment on these revised research and data needs. The Council is anticipated to make recommendations and adopt a final version of the document at its November 12-17, 2006 meeting in Del Mar, California. Written comments **received by close of business October 25, 2006** will be mailed to Council members prior to the meeting. Comments or materials received at the Council office **after October 25 but by close of business November 7** will be included in the supplemental materials distributed to the Council on the first day of the meeting. Written comments received at the Council office on November 8 or later will not be distributed to Council Members nor will they be part of the administrative record of this Council meeting. The Council will also take public testimony regarding this document at the November Council meeting. It is the individuals responsibility to provide copies of any written testimony brought to the meeting, please call the Council office for details.

1.2 Schedule of Document Development and Review

The Council last updated its Research and Data Needs document and the West Coast Fisheries Economic Data Plan in 2000 for the years 2000-2002. Due to heavy workload this process was tabled in 2004. In 2006, although the Council's workload remains high, the Council directed the SSC to draft an abbreviated documentation of the Council's research and data needs that remain from the 2000 process and identify priority items that have emerged since then.

The SSC discussed a revised schedule for the 2006 process at its April and June 2006 meetings. The 2006 process was well behind the 2000 schedule upon initiation so the following represents a truncated process to facilitate a summary document in 2006:

April 2006 - Revised schedule for 2006 discussed and Council staff was directed to compile recently identified research and data needs by FMP from various Council documents for SSC review in June.

June 2006 - The SSC assigned each subcommittee Chair the task of reviewing the Research and Data Needs and West Coast Fisheries Economic Data Plan documents from 2000 and the Council staff compilation of recent research and data needs and drafting a corresponding section of the 2006 document. In an effort to streamline the process the SSC incorporated economic and social science issues into the Research and Data needs document and recommends not revising the West Coast Fisheries Economic Data Plan for this cycle. In addition to the existing sections on groundfish, salmon, coastal pelagic species, and marine reserves, a new section was created for the relatively new FMP for Highly Migratory Species and the marine reserves section was expanded to include emerging issues associated with ecosystem based fishery management.

September 2006 - Council staff compiles the draft into a single summary document for review by the Council, its advisory bodies, and the public at the September 2006 Council meeting. The Council adopts a document for public review between the September and November Council meetings.

November 2006 - A final draft is included in the November 2006 briefing book. At its November meeting the Council approves a final document to be submitted to various organizations.

December 2006 - Council staff completes and transmits the final Research and Data Needs document to National Marine Fisheries Service West Coast Regional Offices and Science Centers, West Coast States, Pacific States Marine Fisheries Commission, and National and West Coast Sea Grant Institutions.

1.3 Document Organization and Criteria Used

This document is a summary of research and data needed by the Council to implement its responsibilities as defined by the MSA, the Regulatory Flexibility Act, and other pertinent legislation. The document is largely organized according the Council's four fishery management plans with additional sections for economic and social science components and ecosystem based fishery management and marine protected area issues. Where appropriate, these sections (1) describe the current status of the highest priority needs for an FMP as identified in the Executive Summary of the Research and Data Needs 2000-2002 document, (2) address continuing issues, and (3) identify important emerging issues not covered in the 2000 document. Following is the set of criteria used to identify the highest priority needs.

The following ranked criteria were used to guide the selection and prioritization of research and data projects:

1. Projects address long-term fundamental problems of West Coast fisheries.
2. Projects improve the quality of information, models, and analytical tools used for biological assessment and management.
3. Projects increase the long-run market competitiveness and economic profitability of the industry.
4. Projects contribute to the understanding by decision makers of social and economic implications in meeting biological and conservation objectives.
5. Projects provide data and/or information to meet the requirements of the Magnuson-Stevens Act, the Regulatory Flexibility Act, and other applicable laws.

2.0 GROUNDFISH FISHERY MANAGEMENT PLAN

2.1 PROGRESS ON 2000 GROUNDFISH PRIORITIES

Establish a West Coast stock assessment coordinator.

A position was established at NWFSC to coordinate groundfish stock assessments. The 2005 assessment cycle, during which 23 stock assessments were prepared and reviewed, would not have been possible without extensive coordination.

Develop and implement a coastwide multi-state system for electronic recording of fishticket information and fishery logbooks in consistent form.

An integrated electronic recording system for fishticket and logbook information for the Pacific coast is not yet in place. There has been some progress towards this goal. A pilot project was developed by NWFSC and tested by CDFG and one processor in 2004, but this project received no additional funding. Funds for development of an electronic fishticket system for the Pacific coast have been allocated to the Northwest Regional Office for distribution to PSMFC as part of a nationwide NMFS initiative to promote electronic data recording. It is reasonable to anticipate that this effort will bear fruit within several years.

This item remains a priority. The present need for real-time estimates of landings and discards is acute. The Groundfish Management Team and NMFS track groundfish catches inseason and attempt to produce close to real-time estimates of landings and discards. An electronic fishticket system would provide real-time landings data that are more precise with all the requisite information captured.

Logbooks are used with fishtickets and West Coast Groundfish Observer Program (WCGOP) data to reconcile the total catch by area and determine bycatch rates in association with target species. Logbook data availability can lag by as much as a year, which delays input data to bycatch models and the total catch reconciliation process. Electronic logbooks, like electronic fishtickets, increase accuracy of critical data needed for good management decision-making. Logbook programs should be developed for other commercial sectors beyond the limited entry trawl fishery.

Develop methods, programs, or analytical tools to quantify amount of groundfish discarded by the various fishing sectors.

West Coast Groundfish Observer Program (WCGOP) was established in 2001 to improve estimates of total catch and discard in West Coast fisheries. The program deploys over 40 observers, and collects at-sea data from limited-entry trawl and fixed gear fleets as well as from open access, nearshore, prawn, and shrimp fleets. Currently, the coverage objective is to maintain, at minimum, 20% coverage of the limited-entry trawl fleet and fixed gear fleets. WCGOP has made progress in quantifying discard in trawl fisheries and limited entry fixed gear fleets, however, observer coverage of open access fleets is currently being expanded.

Continue to work on a plan to conduct annual resource surveys.

An annual slope survey conducted by commercial trawlers was initiated by NWFSC in 1998. In 2003, the slope survey was extended onto the shelf and is now intended to be a comprehensive annual survey of both shelf and slope groundfish resources along the entire west coast from the Mexican to Canadian border. This expanded survey supplants the Alaska Fisheries Science Center's triennial shelf survey, which was conducted for the final time in 2004.

Investigate impact of fishing gear on specific habitats and habitat productivity on the West Coast fishing grounds.

A major effort was made to prepare a comprehensive EIS analysis for the essential fish habitat amendment to the FMP. The EIS analysis was an integrated GIS (Geographic Information System) analysis that included the first complete substrate map of the Pacific coast, habitat suitability maps for groundfish species, and maps of fishing impact and habitat sensitivity. This analysis was a significant achievement, but a notable shortcoming was the lack of information on fishing impacts specific to Pacific coast habitats. In an extensive literature review, the EIS identified only two Pacific coast studies. One study was anecdotal; the other was an observational study funded by the Monterey Bay National Marine Sanctuary and published in 1998. Estimates of habitat sensitivity to fishing gear impact and habitat recovery were obtained from studies in other areas. There is no active research program to study fishing gear impacts on Pacific coast marine habitat. However there has been significant progress made consolidating existing information about the groundfish habitats as part of the EFH EIS process.

2.2 CONTINUING ISSUES

General

- Further planning and coordination is needed with longer time horizons to address strategic objectives. A plan is needed for the development of research and data collection projects. The plan should include an evaluation of the availability of assessment data for each species in the FMP and the adequacy of existing surveys to monitor stock abundance trends. The plan should include specific projects as well as mechanisms for coordination and development of an ongoing interagency program for addressing West Coast groundfish research and data needs.

Fishery Monitoring and Data Collection

For reasons already noted, a fully integrated fishery statistics program, including fishtickets, logbooks, shoreside sampling, and observer program data is a priority for groundfish management

- Bycatch model used to estimate total discards is an empirical model whose performance should be evaluated on an ongoing basis as data become available. Refinements to the bycatch model may be needed if model predictions of discard need improvement.
- Information on the size composition of discards was identified as data need in assessments of Dover sole, petrale sole, and English sole. Discards of these species can

be significant and are unlikely to correspond to the default assumption that discards have the same size composition as retained catch. In some cases, the size composition of discard provides information about the magnitude of recruiting year classes

- Use of electronic monitoring of bycatch should be further explored

Electronic technologies and methods should be explored to improve the pace of data reporting of observer information as well as fish ticket information

- There are significant information gaps in the age and growth information needed for assessments. Stock assessment review panel recommendations regarding additional age and growth information needs for stock assessments. In particular
 - Uncertainty of length at age information for petrale sole and Longspine Thornyhead should be examined
 - Sample sizes of age-collections for Widow rockfish should be increased
 - Production ageing should be conducted for blackgill rockfish
 - Age information should be collected and used to resolve broad-scale questions regarding changes over time in growth in bocaccio
 - Age and growth studies should be conducted for Cabezon in particular for the SCS sub-stock

Resource Assessment Surveys

Evaluate feasibility of and develop as appropriate alternative survey methodologies for measuring abundance and distribution of groundfish. In recent years, feasibility studies or small-scale surveys have been conducted using Autonomous Underwater Vehicles (AUVs), submersibles, acoustics, towed cameras, LIDAR, hook and line gear, and egg and larval sampling. Research should be conducted to evaluate the comparative costs and utility of these alternative survey methods for groundfish assessment.

- Develop a coastwide survey of rockfish populations in untrawlable areas. Fairly low cost non-extractive advanced technologies such as bottom mapping AUV's currently are available. The use of comprehensive non-extractive methods to assess abundances in areas not well surveyed by the current bottom trawl survey should be developed and evaluated.
- Improve survey information available for canary and widow rockfish.. New surveys cooperative industry surveys for canary and widow rockfish are currently being developed and hold promise.
- Additional attention should be given to evaluating hook and line or longline gear for surveying rockfish populations. The gear is inexpensive, can be standardized across survey platforms, is deployable on a variety of bottom types, and is suitable for cooperative research projects with the fishing fleet. Since most rockfish species are not common and have low productivity, sustainable yields are likely to be low even after overfished species are rebuilt. Only low cost or self-funding survey methods may be viable over the long term given the vagaries of state and federal funding for fisheries research.

- Conduct additional investigations to improve the hake acoustic survey including:
 - Evaluating the current target strength for possible biases
 - Exploring alternative methods for estimating target
 - Continuing to compare spatial distributions of hake across all years and between bottom trawl and acoustic surveys to estimate changes in catchability/availability across years.

Biological Information Including Fishery and Productivity Parameters

- Expand research on basic life history of nearshore groundfish stocks that are targeted by hook and line fisheries and recreational fisheries. Studies should be specifically designed to estimate basic assessment information, including growth curves, length-weight relationships, age and length-maturity schedules, and longevity. Identify which species in the groundfish FMP are lacking this basic information, and develop a timetable for generating this information.
- Conduct comprehensive gut analysis of groundfish to determine basic trophic interactions. Only piecemeal information is currently available. Comprehensive information will be essential for developing ecosystem assessments for the California Current Large Marine Ecosystem

Stock Assessment Modeling

- Evaluate the statistical properties (i.e., bias, estimability, variance, etc.) of current stock assessment models used for groundfish. Assessment models for groundfish are complex with many estimated parameters, yet often the data used to fit these models are sparse and uncertain. The reliability of model estimates should be tested using simulation procedures.
- Conduct field projects and modeling studies to determine which selectivity assumptions (dome shape vs. asymptotic) are most appropriate for the various groundfish stocks including lingcod and numerous species of rockfish with age structured assessments.
- Continue the evaluation of OY control rules, biological reference points, spawner-recruit relationships and harvest policies used to make decisions about acceptable biological catch and harvest guideline/optimum yield for groundfish. Simulation methods should be used to evaluate the performance of harvest control rules used to determine OY, and to test alternative methods for determining B_{MSY} and F_{MSY} . Harvest policies should be tested to determine whether they are robust to decadal- scale environmental variation.
- Evaluate how best to account for and report uncertainty in stock assessments. Explore alternative approaches to present uncertainty in a way that facilitates informed decision-making.

Habitat

- Specifically identify habitat areas of particular concern: those rare, sensitive, and vulnerable habitats (to adverse fishing and nonfishing effects). Identify associated life

stages and their distributions, especially for species and life stages with level 1 (or no) information. Develop appropriate protection, restoration, and enhancement measures.

- Identify any existing areas that may function as “natural” reserves and protection measures for these areas.
- Map benthic habitats on spatial scales of the fisheries and with sufficient resolution to identify and quantify fish/habitat associations, fishery effects on habitat, and the spatial structure of populations. Mapping of the rocky areas of the continental shelf is critical for the identification of the rocky shelf and non-rocky shelf composite EFHs.
- Explore merits of harvest refugia as a potential management tool. Determine candidates, sites, and criteria for refugia; develop quantitative and qualitative methods to assess the effectiveness of the refugia; and develop methods to protect refugia from anthropogenic impacts.
- Conduct experiments to assess the effects of various fishing gears on specific habitats on the West Coast and to develop methods to minimize those impacts, as appropriate. From existing and new sources, gather sufficient information on fishing activities for each gear type to prioritize gear research by gear, species, and habitat type.
- Explore and better define the relationships between habitat, especially EFH, and productivity of groundfish species. Improved understanding of the mechanisms that influence larval dispersal and recruitment is especially important.
- Evaluate the potential for incentives as a management tool to minimize adverse effects of fishing and nonfishing activities on EFH.
- Standardize methods, classification systems, and calibrate equipment and vessels to provide comparable results in research studies and enhance collaborative efforts.
- Develop methods, as necessary, and monitor effectiveness of recommended conservation measures for nonfishing effects. Develop and demonstrate methods to restore habitat function for degraded habitats.

2.3 EMERGING ISSUES

Fishery Monitoring and Data Collection

- Several of the 2005 assessments have conducted historical commercial and recreational catch reconstructions. An effort needs to be made to develop a consistent approach to reconstructing catch histories. The ideal outcome would be a single document outlining the best reconstructed catch histories for each species (c.f. Rogers (2003) that lists foreign catches). Particular attention should be paid to constructing a coastwide catch history for rockfish.

- The California landing receipts on microfilm back to 1950 should be incorporated into the landings database.

Resource Assessment Surveys

- Develop methods to integrate the NWFSC shelf-slope survey into groundfish assessments.
- Accurate bottom substrate maps, including trawlable and untrawlable habitat, are critical to interpretation of survey abundance indices. Efforts should continue to refine habitat maps of Pacific coast continental shelf and slope. Many commercial vessels are now using automated mapping software to augment digital navigation charts with improved bathymetry and bottom substrate information from echosounders. Cooperative research projects to access this information should be considered.
- Examine how best to use young-of-the-year groundfish surveys in stock assessment. Topics that need to be considered include 1) review and finalization of protocols for an integrated, coastwide pre-recruit survey, 2) evaluation of methods for including existing pre-recruit survey data in groundfish stock assessments and 3) evaluation of the usefulness of pre-recruit abundance indices in assessing the status of groundfish stocks.

Biological Information Including Fishery and Productivity Parameters

- Current harvest policies for rockfish use female spawning biomass or egg production as a metric of reproductive output. Recent laboratory research suggests that the larval survival of black rockfish increases with the age of the spawner, a result that calls into question the current working assumption. At present it is unclear if this is a general characteristic of rockfish reproductive biology. Both fieldwork and laboratory studies are needed to evaluate the importance of maternal age in rockfish reproductive biology. Analysis is needed to assess the effects on current harvest policies.

Stock Assessment Modeling

- Current assessment models treat populations as a single unit. Often there are geographic differences in biological and fishery characteristics without compelling evidence that separate stocks exist. Population densities and temporal pattern of fishing mortality also show geographic differences. Meta-population assessment models should be developed for linked populations. Such models will be necessary to assess impacts of spatially-explicit management measures now being used by Council, and likely to be used to a greater degree in the future.
- The use of recreational fishery CPUE in stock assessments has increased, particularly for assessing nearshore species for which there are no other reliable indices of abundance. Although there have been some recent advances in the analytical methods used to derive abundance indices from CPUE data, further work is needed understand the properties of recreational CPUE data. In particular, the effect of management changes and alternative fishing opportunities should be evaluated.

- Develop guidance on use of Bayesian priors in stock assessment models.
- Develop methods to assess and manage stocks for which data are not adequate to fit age-structured assessment models. Develop procedures to calculate ABCs and OYs for these data-poor stocks.

Habitat

- Continue development of dynamic spatially-explicit models of habitat sensitivity, fishing impact, and habitat recovery. A draft habitat model was developed for the EFH comprehensive risk analysis but was considered too preliminary to be used. Given the Council's intention to review EFH descriptions, HAPC designations and fishing impacts on EFH every five years, a tool will be needed to evaluate ongoing fishing impacts on EFH.

3.0 SALMON FISHERY MANAGEMENT PLAN

Salmon fishery management in the Pacific Northwest is undergoing a shift from mixed stock fisheries to selective fisheries for hatchery stocks. Successful implementation of selective fisheries will require accurate estimates of non-retention mortalities and new, more detailed information on fishery stock contributions and migration patterns. Techniques for Genetic Stock Identification (GSI) are now developed to the point that they are a potential management tool. With the establishment of the coastwide genetic baseline for Chinook, close to 200 stocks of can be identified from a tissue sample. There is currently intense interest in using these techniques for inseason management of weak stock impacts. Recent expansion of listings under the Endangered Species Act, and the new definition of EFH, expand the Council's concerns with both freshwater and marine habitat in relation to harvest strategies and conservation. The revised Magnuson-Stevens Act requires better definitions of MSY and better understanding of population dynamics.

In 2000 we identified three highest priority research and data needs for salmon, along with numerous additional high priority needs. In this review we briefly discuss the progress on the three highest priority needs. Continuing issues are the high priority needs from the 2000 document that form an essential basis for the highest priority needs. Other high priority needs associated with hatchery fish are also included. Emerging issues, briefly noted, are concerned with the implementation of GSI in fishery management.

All research and data projects listed in this section are considered either "high priority" needs or "highest priority needs" according to their ability to meet the criteria listed above.

3.1 Status of the Three Highest Priorities Identified in 2000

1. A more accurate assessment of total fishing related mortality of natural stocks of coho and Chinook. Fishery management regimes designed to reduce impacts through non-retention or selective fishing depend for success on unbiased estimates of non-catch mortality.

Harvest models have been modified to incorporate non-catch mortality. The selective coho FRAM has been approved for Council use, but the selective Chinook FRAM is still under review. There is interest in, and some progress in, the creation of coastwide models. The modified models should work well when exploitation rates on marked stocks are relatively low, but as selective fisheries become more intense these models will tend to underestimate total mortality. This problem could be addressed by using continuous catch equations, which, in turn, would probably require a model of migration patterns. The harvest models become more sensitive to estimates of non-catch fishing mortality as modeled fisheries become more intense. Related to this issue is the need to incorporate explicit consideration of uncertainty and risk in these models as they are developed.

2. Advances in genetic stock identification, otolith marking, and other techniques may make it feasible to use a variety of stock identification technologies to assess fishery impacts and migration patterns. The increasing necessity for weak-stock management puts a premium on the ability to identify naturally reproducing stocks and stocks that contribute to fisheries at

low rates. The CWT marking system is not suitable for these needs. The Council should encourage efforts to apply these techniques to management.

Substantial progress has been made on this item in the past 6 years. A coastwide microsatellite database for Chinook has been developed. A similar database for coho salmon is under development, but needs resources to coordinate efforts for the entire coast. Genetic techniques have improved so that samples can potentially be analyzed within 24-48 hours of arrival at the laboratory. GSI is actively being used in Canada to manage coho salmon fisheries off the west coast of Vancouver Island. Studies are under way to evaluate the potential usefulness of real time GSI samples in Chinook management, particularly in relationship to Klamath fall Chinook. There are proposals to develop operational alternatives to time-area management using these techniques, in combination with existing CWT marking, mass marking, otolith microchemistry, and other emerging stock identification techniques. These studies are now the highest priority for salmon management.

3. Encourage development of probabilistic habitat-based models that incorporate environmental variation to establish harvest policies and enable risk assessment for fishing strategies.

Overfishing definitions are required to relate to a measure of MSY. MSY for salmon is related to productivity, which varies annually in freshwater and the marine environment. Techniques for evaluating productivity, or survival, in freshwater and marine habitats are needed to set appropriate harvest targets and associated conservation guidelines such as escapement floors and overfishing definitions.

Various habitat-based models have been developed, but in general they are not being applied to harvest management. One reason for this is that most of these models are developed to identify limiting factors and evaluate potential habitat restoration measures. Application to harvest management would require refined population dynamic components to these models. There is the potential for using this technique to evaluate recovery exploitation rates. Other possible contributions could be improved understanding of climate variability and environmental influences on survival and stock productivity. Once satisfactory habitat-based models of population dynamics have been developed, they can be used in management strategy evaluations to simulate alternate management scenarios. This could be a valuable contribution to harvest management, but to become useful substantial development efforts are needed.

3.2 Continuing Issues

The following items, identified as high priority in 2002, are directly related to the highest priority items above.

Non-catch Fishing Mortality. In recent years, an increasing proportion of impacts of Council fisheries on naturally-spawning stocks have been caused by non-catch mortality as regulations such as landing ratio restrictions and mark-selective retention have been employed. Research, using standardized methodologies (e.g., handling, holding, reporting, post-mortem autopsies, etc.), is needed to estimate release mortality, encounter, and drop-off rates associated with gears and techniques that are typically employed in different areas and fisheries. Special attention

needs to be paid to mid-term and long-term mortality. Fleet profile data (i.e., fishing technique and gear compositions) are needed to estimate release mortality rates for individual fisheries.

Continuous Catch Equations. Because current planning models employed by the Council are constructed using simple linear, independent equations, interactions between stocks and fisheries within a given time step are ignored. This can result in biased estimates of impacts. Research is needed to investigate the feasibility of recasting the models from discrete to continuous forms. e.g., competing exponential risk catch equations.

Migration. The Council currently employs "single pool" type models (i.e., ocean fisheries operate simultaneously on the entire cohort) for evaluating alternative regulatory proposals. Under certain conditions, such models can produce results that are inconsistent with expectations of biological behavior. For example, if a fishery off Central California is closed to coho fishing for a given time period, the fish that were saved become available to fisheries off the Northwest Coast of Washington in the next time period. Research is needed to determine the feasibility of incorporating explicit migration mechanisms into planning models.

Coastwide Models. Currently, at least five models are employed to evaluate impacts of proposed regulatory alternatives considered by the Council. A single coastwide Chinook model would provide analytical consistency and eliminate the need to reconcile and integrate disparate results. Additionally, research is needed to determine the feasibility of combining Chinook and coho into a single model to simplify tasks of estimating mortalities in fisheries operated under retention restrictions (e.g., landing ratios or non-retention).

Alternatives to Time-Area Management. The annual planning process centers on the crafting of intricate time-area management measures by various groups. The feasibility of using alternative approaches (e.g., pre-defined decision rules to establish upper limits on fishery impacts, individual quotas, effort limitation) to reduce risk of error, decrease reliance on preseason abundance forecasts, improve fishery stability, simplify regulations, and reduce management costs needs to be investigated. For instance, the integration of Council planning processes with the abundance-based coho management frameworks under consideration by the Pacific Salmon Commission and by the State of Washington and Western Washington treaty tribes to streamline the preseason planning process needs to be developed and evaluated.

Selective Fisheries. The Council began to employ mark-selective retention restrictions for coho fisheries in 1998. Research is needed to investigate the utility of other types of selective fisheries. For example, GSI might be used to identify concentrations of stocks of conservation concern leading to time-area closures.

Mass Marking. Estimates of mark rates are essential for planning mark-selective fisheries. The accuracy of mark and release rates needs to be evaluated as well as the variability of mark-induced mortalities under operational conditions.

Stock Identification. In most cases it is not feasible to rely upon coded-wire-tagging of natural stocks, particularly those in depressed status, to obtain direct information on patterns of distribution and exploitation. Alternative stock identification technologies should be explored as a means to collect data necessary for stock assessment purposes. Research is needed to improve

ability to estimate contributions of natural stocks in ocean fisheries and escapement. Potential research areas include 1) association studies to determine the degree to which hatchery stocks can be used to represent distribution and migration patterns of natural stocks; 2) genetic stock identification, DNA, otolith marking, and scale studies; 3) improved statistical methods and models; and 4) basic research on stock distribution and migration patterns.

Limiting Factors. Research is needed to identify and quantify those factors in the freshwater habitat which limit the productivity of salmon stocks. Research should focus on 1) quantifying relationships between habitat factors and salmon production; 2) measuring the quantity and quality of these habitat factors on a periodic basis; and 3) evaluating habitat restoration projects for both short-term and long-term effects. Activities such as water diversions, logging, road building, agriculture, and development have reduced production potential by adversely affecting freshwater conditions. Habitat quality and quantity are crucial for the continued survival of wild stocks.

Environmental Influences on Survival. Determine natural survival and stock distribution in the estuary and ocean, year-to-year, age-to-age, and life-history variability, and relationships to measurable parameters of the environment (i.e., temperature, upwelling, etc.). Substantial predictive errors in forecasts based on previous year returns and apparent large-scale multistock fluctuations in abundance suggest important large-scale environmental effects. Some work has been done for coho, but little is known for Chinook. Included in the information need are long-term and short-term relationships between environmental conditions and fluctuations in Chinook and coho salmon survival, abundance, and maturation rates.

Explicit Consideration of Uncertainty and Risk. Current planning models employed by the Council are deterministic. Most aspects of salmon management, such as abundance forecasts and effort response to regulations, are not known with certainty. Given the increased emphasis on stock-specific concerns and principles of precautionary management, the Council should receive information necessary to evaluate the degree of risk associated with the regulations under consideration. Research is needed to evaluate the accuracy of existing planning models, characterize the risk to stocks and fisheries of proposed harvest regimes, and to effectively communicate information on uncertainty for use in the Council's deliberations.

In addition to the above high-priority items a number of issues related to hatchery/wild interactions of ongoing interest were identified in 2000:

Genetics. Determine the extent to which there may be gene flow between hatchery and wild stocks, and what the likely effect of that gene flow may be on the fitness of wild stocks. A new genetic technique that is being applied to this problem is Full Parental Genotyping. If all mating adults can be captured and genotyped then offspring can be linked to their specific parents. This has great power for identifying the relative success of various hatchery/wild matings, but is limited in practice to relatively small systems and systems where all returning adults can be captured.

Freshwater Ecology. Investigate the ecological (competition, predation, displacement) effects of hatchery fish on natural production in freshwater. All life stages from spawner to egg to smolt may be affected.

Estuary Ecology. Migration timing, habitat utilization patterns, competition for food or space, and predator interactions are areas of interest. Differences between hatchery and natural smolts in these areas could help address the questions of the importance of density-dependent growth and survival and potential negative effects of hatchery releases on natural stock production.

Early Ocean Life-history. Points of comparison between hatchery and wild stocks could include: ocean distribution, migration paths and timing, size and growth, food habits, and survival rates.

Identification of Hatchery Fish. The presence of hatchery fish may interfere with the accurate assessment of the status of natural stocks. This problem may be alleviated by the use of mass-marking using otolith marking, CWTs, genetic marking, fin removal, or other technologies to estimate the contribution of hatchery fish to fisheries and natural spawning populations.

Supplementation. Research is needed to investigate the utility of using artificial propagation to supplement and rebuild natural stocks. Guidelines for the conduct of supplementation to preserve genetic diversity and legacy of populations are needed. Special care is needed to ensure that supplementation programs do not unintentionally jeopardize natural runs.

3.3 EMERGING ISSUES

Emerging issues are related to the high priority recently assigned to the implementation of GSI technologies in weak-stick fishery management. Research tasks and products necessary for this to be successful are:

Identification of the error structure of GSI samples taken from operating fisheries.

Development and application of technologies to collect high-resolution at-sea genetic data and associated information (time, location, and depth of capture, ocean conditions, scales, etc.

Collection of stock-specific distribution patterns on a coast-wide, multi-year basis analogous to the current CWT data base, but at a higher resolution.

Identification of stock distribution patterns useful for fisheries management and appropriate management strategies to take advantage of these distribution patterns.

Development of pre-season and in-season management models to implement these management strategies and integrate them with PFMC management.

4.0 COASTAL PELAGIC SPECIES FISHERY MANAGEMENT PLAN

4.1 PROGRESS ON 2000-2002 CPS PRIORITIES

Gain more information about the status of the CPS resource in the north using egg pumps used during NMFS surveys, sonar surveys, and spotter planes.

To address these questions, biological information has been collected from NMFS research surveys off the Pacific Northwest (PNW). So far, the PNW research surveys have occurred in July 2003, March and July 2004, and winter 2005. These Southwest Fisheries Science Center-based surveys included sardine acoustic trawl and Continuous Underway Fish Egg Sampler surveys off the coast of Oregon and Washington. The surveys were designed to fill major gaps in knowledge of sardine populations, by measuring the age structure and reproductive rates, and assessing the extent the fishery is dependent on migration and on local production of sardine. The primary objective of the surveys is to accumulate additional biological data regarding the northern expansion of the population into waters off the PNW and ultimately, to include data directly (or indirectly) in ongoing stock assessments of both Pacific sardine and Pacific mackerel.

Develop a coastwide (Mexico to British Columbia, Canada) synoptic survey of sardine and Pacific mackerel biomass, i.e., coordinate a coastwide sampling effort (during a specified time period) to reduce "double-counting" caused by migration.

The first coast-wide, Baja California to British Columbia synoptic survey was completed in April 2006. Hopes are that this will be the first survey in a long time series, possibly within the PaCOOS framework. The continuance of these synoptic research surveys on an annual basis is necessary to ensure survey results are representative of the entire range of this species (as well as other coastal pelagic species of concern). That is, developing and conducting such a survey will necessarily require considerable additions to current budgets, staff, and equipment.

Increase fishery sampling for age structure (Pacific sardine and Pacific mackerel) in the northern and southern end of the range. Establish a program of port sample data exchange with Mexican scientists (Instituto Nacional de la Pesca [INP], Ensenada).

There has been interest in coastwide management for the Pacific sardine fishery which would entail a more consistent forum for discussion between the U.S., Mexico, and Canada. Canada will host the next Trinational Sardine Forum in November of 2006. Recent U.S.-Mexico bilateral meetings indicated willingness from Mexico to continue scientific data exchange and cooperation on research, and engage in discussions of coordinated management. Mexico suggested that the MEXUS-Pacifico Cooperation Program would be a good venue for starting that discussion. Mexico also agreed to host a Mexico-U.S. scientific meeting to discuss CPS in the f.

Evaluate the role of CPS resources in the ecosystem, the influence of climatic/oceanographic conditions on CPS; predatory/prey relationships. Increase the use of fishery information to estimate seasonal reproductive output of stock (e.g., fat/oil content).

The CPSMT continues to pursue research to evaluate the role of CPS resources in the ecosystem, the influence of climatic/oceanographic conditions on CPS, and define predator-prey relationships. In 2004, the Council directed the CPSMT to initiate the

development of a formal prohibition on directed fisheries for krill. This proposed action is in recognition of the importance of krill as a fundamental component of the ecosystem and a primary food source for much of the marine life along the West Coast. In March 2006, the Council adopted a complete ban on commercial fishing for all species of krill in West Coast Federal waters and made no provisions for future fisheries. They also specified essential fish habitat (EFH) for krill, making it easier to work with other Federal agencies to protect krill.

Improve information on salmon and other bycatch in the CPS fishery.

NMFS SWR initiated a pilot observer program for California-based commercial purse seine fishing vessels targeting CPS in July 2004 with hopes of augmenting and confirming bycatch rates derived from CDFG dockside sampling. A total of 107 trips by vessels targeting CPS (228 sets) were observed from July 2004 to January 2006. Future needs of the CPS observer program include: standardization of data fields, development of a fishery-specific Observer Field Manual, construction of a relational database for the observer data, and creation of a statistically reliable sampling plan.

4.2 PACIFIC SARDINE

High Priority Issues Identified Since 2002

1. Growth data for Mexico, southern California, northern California, the Pacific northwest and the offshore areas should be collected and analyzed to quantitatively evaluate differences in growth among areas. This evaluation would need to account for differences between Mexico and the U.S. on how birthdates are assigned, and the impact of spawning on growth.
2. The timing and magnitude of spawning off California and the Pacific northwest should be examined.
3. The likelihood of various stock structure hypotheses should be examined using existing tagging data and additional tagging experiments or (preferably) techniques such as analyses of trace element composition.
4. Biological surveys should include regular systematic sampling of adult sardine for: 1) reproductive parameters for DEPM; 2) population weight at age; and 3) maturity schedule. Specifically, adults collected from survey trawls must be collected and analyzed more routinely in the future than has been the case in the past.
5. Information which could be used in an assessment of the Pacific northwest component of a single coastwide population or of a separate Pacific northwest stock should be obtained. Synoptic surveys of Pacific sardine on the entire west coast have the potential to provide such information as well as the basic data.
6. Alternative methods for indexing the population (e.g. acoustics) should continue to be evaluated. Acoustic methods are a qualitatively different approach to indexing relative abundance and are the primary fishery-independent method for obtaining abundance indices for many of the world's major pelagic fish stocks. Acoustic methods have been applied to northern anchovy off California. Acoustic data have the potential to provide information on the relative abundance of the populations off southern California and the Pacific northwest.

Continuing Issues

1. The Tri-national Sardine Forum and Mexus-Pacifico (i.e. the NMFS-INP Forum) should be utilized to share fishery, survey and biological information among researchers in Mexico, Canada, and the U.S. The long-term benefits of this forum will be greatly enhanced if it can be formalized through international arrangements.
2. There should be overall greater collaboration with industry in the collection and analysis process for coastal pelagic species, including Pacific sardine.

Emergent Issues

1. The DEPM method should be extended so that constraints are placed on the extent to which the estimates of P_0 vary over time.
2. The data on maturity-at-age should be reviewed to assess whether there have been changes over time in maturity-at-age, specifically whether maturity may be density-dependent.
3. The aerial surveys should be augmented to estimate schooling areas and distinguish schools, and the enhanced survey design should undergo rigorous review. Data (e.g. bearing and distance to schools) should be collected which could be used in line transect-type estimation methods. 'Sea-truthing' of the species identification of the aerial surveys will enhance the value of any resulting index of abundance.
4. An aerial survey program should be started in the Pacific northwest. Such a survey program would provide data for a component of the population currently not surveyed. However, it would take several years before any index based on such a survey could be included in the assessments.
5. The extent of ageing error should be quantified and included in future assessments.
6. Explore the use of Pacific Northwest surveys (i.e.: NWFSC; Bob Emmett) as an index of abundance.

4.3 PACIFIC MACKEREL

High Priority Issues Identified Since 2002

1. Efforts should be made to obtain survey (IMECOCAL) larvae abundance and distribution data from Mexico and to incorporate such data into future assessments.
2. There is a lack of biological sampling (and catch) data available from Mexico for inclusion in the assessment, which is more critical in recent years when the Mexican catch has been as large as or larger than that of California.
3. A concerted approach to develop a coastwide synoptic survey, ideally on an annual basis, to estimate an index of mackerel biomass should be initiated because there is a lack of fishery independent survey data, in particular outside of the Southern California Bight.
4. The maturity schedule was developed more than 20 years ago, and it should be re-examined, with new data.

Continuing Issues

1. There should be overall greater collaboration with industry in the collection and analysis process for coastal pelagic species, including Pacific mackerel.

Emergent Issues

1. The survey design of the new aerial spotter index should incorporate rigorous protocols. Attempts should be made to estimate school surface area. Also, an aerial spotter survey should be initiated in the Pacific Northwest in conjunction with industry.
2. There seems to be a mis-match between the observed recruitment dynamics (boom-bust) and the underlying spawner-recruit model (uncorrelated recruitment deviations).

4.4 MARKET SQUID

High Priority Issues Identified Since 2002

1. Additional work is required on reproductive biology, including the potential fecundity of newly mature virgin females, the duration of spawning, egg output per spawning bout, the temporal pattern of spawning bouts, the growth of relatively large immature squid, and the growth of mature market squid. Important questions about growth might be addressed through SEM studies of statoliths.

Continuing Issues

1. There should be overall greater collaboration with industry in the collection and analysis process for coastal pelagic species, including market squid.

Emergent Issues

1. The potential use of target egg escapement levels is partly predicated on the assumption that the spawning which takes place prior to capture is not affected by the fishery and contributes to future recruitment. However, since the fishery takes place directly over shallow spawning beds, it is possible that incubating eggs are disturbed by the fishing gear, resulting in unaccounted egg mortality. It is also possible that the process of capturing ripe squid by purse seine might induce eggs to be aborted, which could also affect escapement assumptions.
2. The CalCOFI ichthyoplankton collections contain approximately 20 years of unsorted market squid specimens that span at least two major El Niños. This untapped resource might be useful in addressing questions about population response to El Niño conditions.

5.0 HIGHLY MIGRATORY SPECIES FISHERY MANAGEMENT PLAN

5.1 Background

The Council's fishery management plan (FMP) for highly migratory species (HMS) covers a broad range of species including tunas, billfishes, and sharks. The spatial extent of the Pacific Ocean used as habitat for these species is much larger than the USA's Exclusive Economic Zone (EEZ). The HMS FMP recognizes that stock assessment and management of these species cannot be done unilaterally – rather it must be done in conjunction with other nations that exploit these species throughout their range.

In the Pacific Ocean, HMS are managed by two regional fishery management organizations (RFMO) – Inter-American Tropical Tuna Commission (IATTC) and Western and Central Pacific Fisheries Commission (WCPFC) – that together cover the breadth of the Pacific Ocean habitat for the species included in the Council's HMS FMP (Figures 1 and 2). Stock assessments and related research are conducted under the auspices of these RFMO. USA scientists (whose affiliations include NMFS, academia, NGOs, and the fishing industry) participate in both RFMO processes.

A third scientific organization – International Scientific Committee on Tuna and Tuna-like Species in the North Pacific Ocean (ISC) – conducts stock assessments for the North Pacific HMS stocks that straddle the 150° W longitude boundary between the RFMOs. Examples of these stocks include North Pacific albacore, Pacific bluefin tuna, swordfish, and striped marlin. The ISC is not an RFMO in that it does not manage HMS international fisheries. Rather, it provides the stock assessments that the RFMOs use to base management decisions for the straddling stocks.

Both of the RFMOs (IATTC and WCPFO) have scientific staff (either in-house or contracted) with responsibility and funding for data collection, biological studies, and stock assessment. The Council's role in specifying research and data (R&D) needs for the tropical tunas (yellowfin, bigeye, and skipjack) that are the primary focus of the RFMOs is somewhat limited and may duplicate other ongoing efforts. Instead the focus for this first draft of the HMS Research and Data Plan needs focuses on the HMS that (1) are not the primary focus of the RFMOs and (2) have ongoing international stock assessment efforts.

Based on the above criteria, R&D needs for North Pacific albacore, Pacific bluefin tuna, swordfish, and striped marlin are delineated below. Much of the material was extracted from recent ISC assessment working group (WG) reports on these species. As such, the R&D needs reflect consensus of the respective WG members, i.e. international scientists (including USA representatives) who are closest to the data and analyses. It should be noted that the ISC WGs do not formally prioritize their R&D lists, and that these classifications were inferred from sections of the WG reports that discuss the strengths and weaknesses of the assessments. Furthermore, since the focus is on species for which assessments are ongoing most of the items are categorized as “continuing issues”. Those that are considered “high priority” are noted. This is not to imply that there are no emerging issues for the Council with respect to HMS. Rather, it acknowledges that the prediction of the key issues that will emerge is more speculative. A final

section entitled “Emerging Issues” is provided to highlight some of the issues most likely to emerge in the near term – especially for HMS that are not currently being assessed.

5.2 Status of the Research and Data Needs Identified in 2000

There was no section for Highly Migratory Species in the Council’s Research and Data Needs 2000-2002 document. Therefore, no update on progress is included here.

5.3 Continuing Issues

Research and Data Needs are identified in this section for the major HMS species pertinent to the Pacific Council.

5.3.1 North Pacific Albacore

Fisheries Statistics: Timely annual submission of national fishery data to the ISC Albacore WG data manager is critical for producing timely and up-to-date stock assessments. Additional resources are needed to oversee the submission of these data, provide database management, and improve documentation of the entire database system including metadata catalogs.

Biological Studies: Biological information is a critical building block for stock assessments. It should be reviewed and updated regularly to capture changes in population parameters if they occur. Unfortunately, this process has not been followed for North Pacific albacore because of limited resources for routine biological studies. Consequently, the stock assessment models used by the ISC Albacore WG rely on a patchwork of biological information that was developed largely in the 1950s and 1960s.

There is a critical need to reassess the biological information and to conduct contemporary studies to update this information. More specifically, there is a critical need to conduct studies on:

1. age and growth with the goal of updating growth rates and comparing with older studies (*high priority*);
2. reproductive biology with the goal of updating the maturity ogive (*high priority*); and
3. development of new indices of abundance particularly from fisheries that regularly catch recruitment age albacore (age 1), e.g. the USA recreational fishery (*high priority*).

Less critical but still important for improving the stock assessments are studies on:

4. migration and habitat utilization, with the goal of better informing fishery effort standardization and fishery selectivity/catchability assumptions;
5. An examination whether there are multiple sub-stocks with juveniles having different migratory behaviors (i.e., juveniles from different spawning localities with different migration routes and timetables)
6. environmental factors, as they relate to recruitment, growth, maturity, and catchability of albacore.

Stock Assessment and Management Studies: Recent stock assessment results as well as fishery developments suggest that the North Pacific stock of albacore is at or fast approaching full exploitation. Demand for more frequent and more precise information on status of the stock and

the sustainability of the fisheries is therefore likely to increase. With this in mind, the albacore stock assessment needs improvement in several of its facets:

7. investigation of competing assessment models using simulation to ascertain each model's strength and weakness when faced with input data generated from a known albacore-like population (*high priority*);
8. simulation studies to assist fishery managers in selecting appropriate biological reference points for albacore (*high priority*);
9. investigation of CPUE standardization;
10. refinement of the VPA-2Box model (the WG's current assessment model);
11. investigation of the applicability of Stock Synthesis 2 as an alternative assessment model for albacore; and
12. evaluation of the utility of formally adding tagging data into the assessment.

5.3.2 Pacific Bluefin Tuna

Fisheries Statistics: The timeliness of data reporting, as outlined for albacore above, is equally important for bluefin tuna. Additionally,

1. the official bluefin catch statistics need further scrutiny, e.g. there are apparent discrepancies between some of the reported catches and the corresponding Japanese import records (*high priority*); and
2. increased port sampling of commercial bluefin length frequencies is needed in the Eastern Pacific Ocean, particularly of the fish destined for the pens in farming operations (*high priority*).

Biological Studies: All of biological studies listed above for albacore are also needed for bluefin tuna. In addition,

3. there is a need to develop seasonal and perhaps area-based weight-length relationships as the bluefin condition factor appears to vary both seasonally and regionally (*high priority*).

Stock Assessment and Management Studies: All of stock assessment and management studies listed above for albacore are also needed for bluefin tuna. In particular, there is a need for additional work on effort standardization if credible indices of abundance are to become available for bluefin tuna (*high priority*).

5.3.3 Striped Marlin and Swordfish

Fisheries Statistics: The timeliness of data reporting, as outlined above for albacore, is equally important for striped marlin and swordfish. Additionally:

1. the official striped marlin catch statistics are considerably less well developed than those for albacore, and significant effort is needed to ensure that the total catch from all nations is well estimated (*high priority*).

Biological Studies: All of biological studies listed above for albacore are also needed for striped marlin and swordfish as well. In addition,

2. stock structure for striped marlin in the Pacific Ocean is more uncertain than for other HMS species and several stock structure hypotheses are credible. Further genetic work is unlikely to resolve the issue. A synoptic, critical review of all available information

(fisheries data, ichthyoplankton data, and genetic studies) is needed to either resolve the issue or at least to reduce the number of credible hypotheses,

3. age and growth data from locally caught fish should be examined, and
4. the distribution of swordfish by season and age within the outer portions of the EEZ and high seas should be evaluated.

Stock Assessment and Management Studies: All of stock assessment and management studies listed above for albacore are also needed for striped marlin **and swordfish**. In particular,

5. there is a need for additional work on effort standardization (*high priority*).

5.3.4 Dorado

The stock structure of dorado in the eastern Pacific should be examined.

5.4 Emerging Issues

5.4.1 Sharks

Most of the tunas covered in the HMS FMP are being assessed – with varying degrees of completeness and sophistication – on a regular basis (Table 1). Some of the billfishes – particularly striped marlin and swordfish – are either being assessed or have assessments planned in the near future. On the other hand, stock assessments for sharks have been preliminary at best, and few and far between. Furthermore, comprehensive shark assessments do not appear to be on the near-term planning horizon for the RFMOs or for the ISC. This situation should not be taken to imply that sharks are unimportant. Nor should it be inferred that sharks are less vulnerable to the effects of fishing than are the tunas and billfishes. In fact, because of the key vital rates of most sharks (especially reproductive rates that are lower than those for tunas and billfishes), many shark species are likely to be more vulnerable to overfishing than other HMS.

To understand this *prima fascia* inconsistency (i.e., perhaps more vulnerable but not assessed), it is necessary to understand the nature of the fisheries responsible for most of the catch of sharks over the past several decades. Internationally, these fisheries tend to be either (1) tuna-targeting fisheries that caught sharks as bycatch in their tuna fishing operations and discarded them (without recording numbers or mass) over most of their fishing history; or (2) smaller scale directed shark fisheries that tend not to report shark catches in a manner suitable for stock assessment, e.g. catch reports that aggregate the catch of multiple shark species into a single ‘shark’ category or do not report the catches at all.

As with the other species covered by the HMS FMP, most shark species cannot be assessed or managed unilaterally by the Council. Some species are highly oceanic with ranges similar to that of tunas (e.g. blue shark). Others are more coastal – with perhaps most of their habitat shoreward of the USA EEZ – but exhibit north-south migrations with significant catches in Mexican waters (e.g. thresher sharks). The net effect is that accounting for the total catch of sharks over their entire period of exploitation (several decades) is not possible. Furthermore, there is a paucity of the biological samples needed to characterize the size of animals taken from the fisheries that account for most of the catch. Active biological studies (age, growth, maturity, food habits, etc.) are ongoing (NMFS, State, and academic researchers) and understanding of the biological characteristics for at least some shark species is probably sufficient for stock

assessment purposes. However, without an accurate history of total catch and the corresponding size samples, stock assessment efforts and concomitant management by the Council will be problematic.

The following species-specific research priorities have been identified for sharks:

Thresher sharks:

- stock structure and boundaries of the species and relationships to other populations;
- the pattern of seasonal migrations for feeding and reproduction, and where and when life stages may be vulnerable
- aging and growth rates, including comparisons of growth rates in other areas; and
- maturity and reproductive schedules

Shortfin mako shark:

- distribution, abundance, and size in areas to the south and west of West Coast EEZ; and
- age and growth rates (current growth estimates differ widely)

Blue shark

- sex and size composition of catches; and
- migratory movements of maturing fish from the EEZ to high seas.

5.4.2 Survivability of Released Fish

Little is known of the long-term survivorship of hooked fishes after release, to assess the effectiveness of recreational tag-and-release methods on big game fishes (pelagic sharks, tunas, and billfishes) and of methods to reduce bycatch mortality in longline fishing. Controlled studies of the survivability of hooked and released pelagic sharks and billfishes are needed to determine the physiological responses to different fishing gears, and the effects of time on the line, handling, methods of release, and other factors. Appropriate discard mortality rates, by species, need to be identified in order to quantify total catch (including released catch).

5.4.3 Essential Fish Habitat

There is very little specific information on the migratory corridors and habitat dependencies of these large mobile fishes; how they are distributed by season and age throughout the Pacific and within the West Coast EEZ; and how oceanographic changes in habitat affect production, recruitment, and migration. Research is needed to better define EFH and to identify specific habitat areas of particular concern (HAPCs), such as pupping grounds, key migratory routes, feeding areas, and where adults aggregate for reproduction. A particularly important need is to identify the pupping areas of thresher and mako sharks, which are presumed to be within the southern portion of the West Coast EEZ, judging from the occurrence of post-partum and young pups in the areas (e.g., NMFS driftnet observer data). Areas where pregnant females congregate may be sensitive to perturbation, and the aggregated females and pups there may be vulnerable to fishing.

5.4.4 Stock Assessment Review

Pacific HMS stock assessments are carried out by the RFMOs and by the ISC. The processes used to conduct the assessments and to have them critically reviewed varies considerably across the organizations and the species being assessed. In none of these cases, however, does the level of critical peer review approach that of the Council's Stock Assessment Review (STAR) process. This may become an issue for the Council if international management regulations begin to affect USA coastal fisheries to a greater extent than they do at present. The Council may want to consider having some member(s) of its SSC to participate in these international processes. This will provide the Council with a better perspective on the stock assessments and the ensuing international management advice.

5.4.5 Interactions with Protected Species and Prohibited Species

More work is also needed to investigate the hooking survivorship of protected species, such as turtles and seabirds, that are caught as bycatch in the HMS fisheries. More work is also required on turtle migration seasonality and routes, and genetic structures of populations by species in order to better understand likely periods of interaction with fisheries and turtle life histories. More work on the size and structure of turtle populations by species would also enable improved application of the ESA and other laws and regulations to HMS fisheries.

Inter-American Tropical Tuna Commission (IATTC)

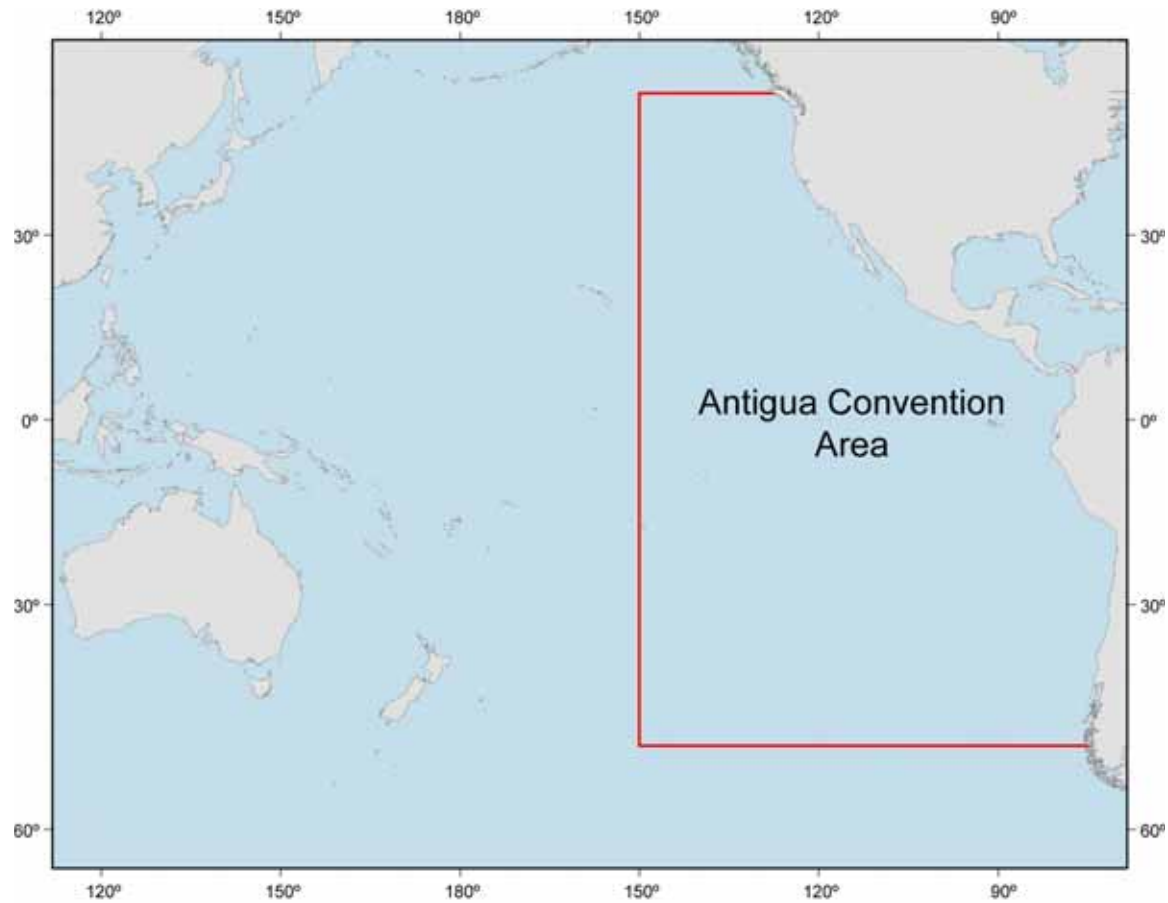


Figure 1. Area covered by the Inter-American Tropical Tuna Commission (IATTC). The Antigua Convention refers to the recent international treaty that revised the IATTC boundaries.

Western and Central Pacific Fisheries Commission (WCPFC)

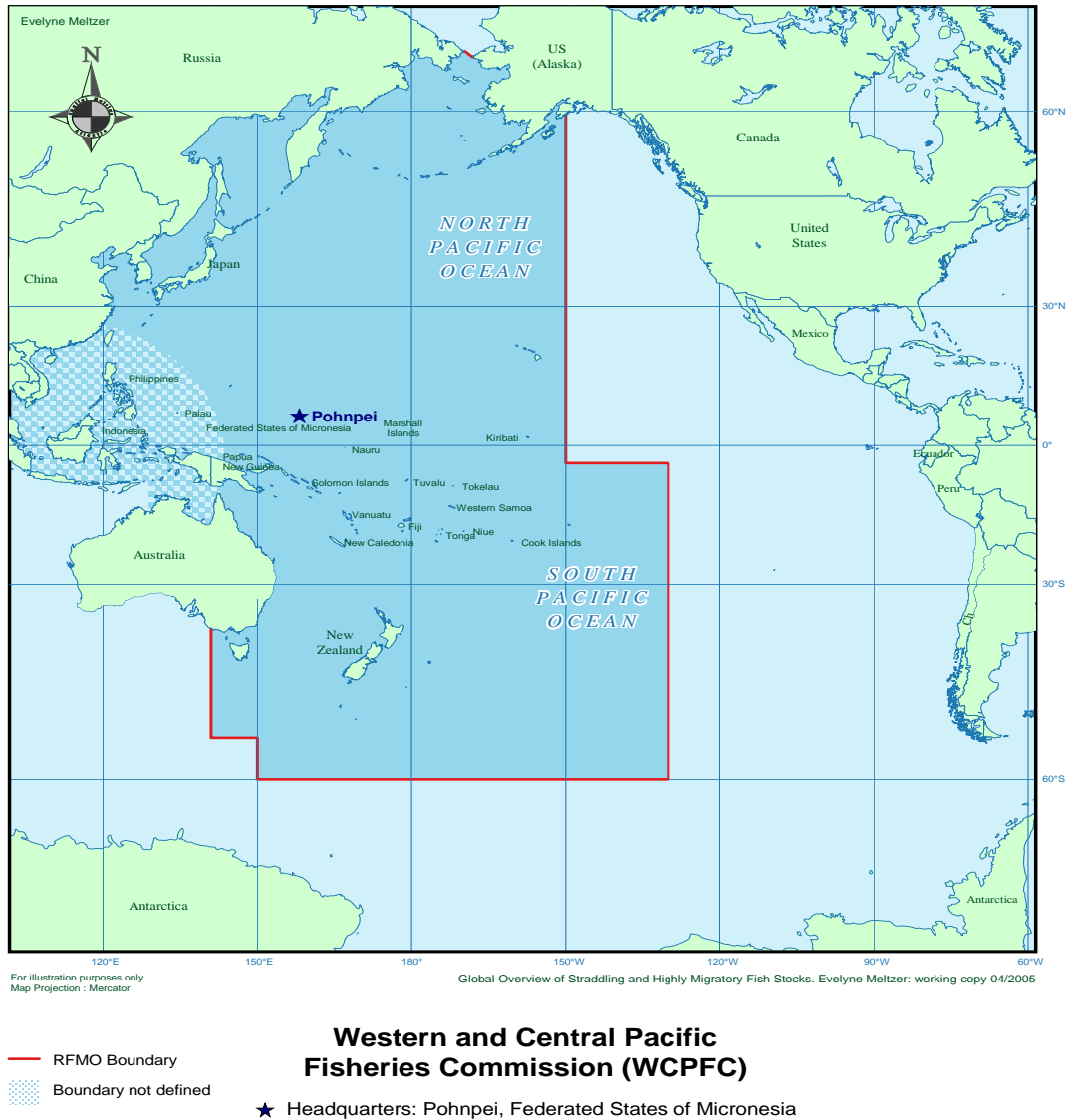


Figure 2. Area covered by the Western and Central Pacific Fisheries Commission (WCPFC).

Table 1. Recent and projected HMS stock assessment schedule (adapted from the draft 2005 PPMC HMS SAFE document).

Species (Stock)	Date (Anticipated)	Organization Responsible for the Assessment
<u>TUNAS</u>		
Albacore (NPO)	2004 (2006)	ISC (ISC)
Bluefin (NPO)	2004 (2006)	ISC (ISC)
Bigeye (EPO)	2005 (2006)	IATTC (IATTC)
Bigeye (WCPO)	2005 (2006)	WCPFC (WCPFC)
Skipjack (EPO)	2004 (2006)	IATTC (IATTC)
Skipjack (WCPO)	2005 (2006)	WCPFC (WCPFC)
Yellowfin (EPO)	2005 (2006)	IATTC (IATTC)
Yellowfin (WCPO)	2005 (2006)	WCPFC (WCPFC)
<u>BILLFISHES</u>		
Striped Marlin (EPO)	2003	IATTC
Striped Marlin (NPO)	(2007)	(ISC)
Swordfish (EPO)	2004	IATTC
Swordfish (NPO)	(2008)	(ISC)
<u>SHARKS</u>		
Common Thresher (WA/OR/CA EEZ)	2001	NMFS
Pelagic Thresher		
Bigeye Thresher		
Shortfin Mako		
Blue (NPO)		
<u>OTHER</u>		
Dorado (EPO)		

Note: Text in parentheses indicates the year the next assessment is anticipated and the organization expected to conduct the assessment. The acronyms listed in this table are defined in the text.

6.0 ECONOMICS AND SOCIAL SCIENCE COMPONENTS

6.1 Progress on Highest Priority Items from 2000-2002

1. *Comparative analysis of limited access and rights-based management programs*

An analysis of these programs is lacking, except for limited information from the Trawl Individual Quota (TIQ) program.

2. *Baseline descriptions of fishing industry and communities and periodic assessment of fishery status*

Periodic assessment of fishery status is contained in Stock Assessment and Fishery Evaluation (SAFE) documents. Quantitative descriptions of baseline economic conditions for specific elements of the fishing industry (e.g. commercial harvesting sector, processors, etc.), or fishing communities, are lacking except for information that can be derived directly from fish tickets on landings and ex-vessel revenues.

3. *Economic and social analysis of groundfish and salmon harvest and management strategies*

Analyses of harvest or management strategies are lacking in groundfish, salmon, and other fisheries. Bycatch models for selected components of groundfish fishery have been developed, and in some cases (i.e. limited entry trawl), reviewed. An economic analysis of strategies in the commercial salmon fishery was done in California cost-earnings survey is underway for the commercial groundfish fleet.

4. *Recreational fishery net economic value and angler participation models*

Net economic value and angler participation models are under development for recreational fisheries in the Pacific Northwest, and development of a similar set of models is planned for California.

5. *Social Data and Socioeconomic baseline profiles of fishing industry and communities*

Brief qualitative overviews are available for 125 West Coast and North Pacific ports and other coastal communities

(<http://www.nwfsc.noaa.gov/research/divisions/sd/communityprofiles/index.cfm>).

Annual port-specific profiles of all West Coast commercial fisheries are being developed for 1981-2005.

6.2 Continuing Needs from 2000-2002

Progress on most items listed above is limited, and each is still important. Continuing needs are divided into three types of activities: Data Collection, Model Development, and Analysis. Data collection is a fundamental activity that is required for analysis, whether or not a particular model is used

Data Collection

Core economic data needs are described in the West Coast Fisheries Economic Data Plan 2000-2002, and are summarized again here in the following table, which has also been augmented to include a broader set of data on communities and information on non-consumptive uses: Core needs pertain to fundamental information relevant to understanding economic behavior or evaluation of economic behavior.

Harvesters	Processors	Charter Vessels	Recreational Fishers	Communities	Non- Consumptive
Revenue from all sources	Revenue and value added	Revenues	Effort and Catch of target species	Revenues from all marine resources	Nonconsumptive direct use (e.g. non-extractive recreation)
Expenditures and costs	Expenditures and costs	Expenditures and costs	Trip costs	Demographics and measures of dependence on fisheries	Indirect use (e.g. ecosystem function)
Employment and income	Employment and income	Employment and income	Angler demographics and socioeconomic characteristics	Demographics, employment and income from fishing, and other sources	Nonuse (e.g. non-market value of threatened or endangered species, ecosystem protection, stock rebuilding plans)
Capacity	Location of customers and product flows Infrastructure and capital		Site specific preferences and valuation	Harbor and fishery related infrastructure	

Data needed for the design and analysis of marine reserves are described in R&D 2000-2002. The perspective here is more general, and relates to all forms of spatial management. In particular, data is needed to enumerate and quantify the spatial distribution of commercial and recreational fishing trips, processors and buying stations, gear/bait/ice/fuel providers, CPFV

operations and other fishery-dependent businesses. Spatial data on fishing trips should include both landing sites and areas fished.

Model Development

Data from recreational fisheries has become more prominent, for example the use of catch-per-unit-effort series in groundfish stock assessments. Consequently, there is an increased need for net economic value and angler participation models, including models of spatial movement, in recreational fisheries. Similarly, participation and response models are also needed for commercial harvesters, including models of spatial movement. Additional model development is recommended below, under new and emerging needs.

Analysis

Several types of analyses are needed to make progress on the highest priorities from 2000-2002:

- Periodic assessment of status of West Coast commercial and recreational fisheries - including participation, profitability, employment, income, and major management issues,
- Evaluation of alternative programs to document and reduce bycatch, bycatch mortality, and effects of gear on habitat – with cost-effectiveness and incentive compatibility included among evaluation criteria,
- Evaluation of alternative management approaches to increase harvest stability and enhance flexibility of fishery participants,
- Evaluation of alternative capacity management programs - including limited entry and dedicated access privileges - on fishery participants and fishing communities. Important non-trawl fisheries to consider are Open Access groundfish and salmon.

In addition, more specific and quantitative information is needed to augment existing socioeconomic profiles of fishing communities, including:

- Trends in major commercial and recreational fisheries, and factors affecting these trends,
- Infrastructure availability and needs (for commercial fisheries, recreational fisheries, other marine resource-related uses),
- Financial aspects of infrastructure development and maintenance,
- Development of indicators of community well-being and resilience that can be linked to changes in regulations, market conditions and other relevant factors.

6.3 New and Emerging Needs

Substantial changes have occurred in West Coast fisheries in the past five years, and recent events (i.e. since 2002) in Council managed fisheries should be evaluated. Two prime examples are the implementation of Rockfish Conservation Areas after the 2002 fishery and the groundfish trawl vessel buyback program in 2003. As above, these needs are divided into three types of activities: Data Collection or Augmentation, Model Development, and Analysis. While some of the data and modeling needs identified in this section are relevant to social as well as economic issues, the Council's July 2005 report *Social Science in the Pacific Fishery Management Council Process*¹ provides more complete information on social science needs and can be found on the Council's web site (www.pcouncil.org/research/resdocs.html).

Data Collection or Augmentation

Surveys or interviews are needed of individuals and entities that participated in the trawl vessel buyback program to determine whether individuals truly departed, or remained, in the groundfish fishery, or are now participating in other fisheries.

Better data on fish buyers and processors and fishing vessels would facilitate evaluation of economic impacts associated with changes in regulations and other factors.. Processor files and vessel characteristic files available from PacFIN are probably in need of updating, or at least, a thorough check for consistency and accuracy. The processor list, in particular, has many typos that create ambiguities regarding the identity of processors. To facilitate analysis, each processor on the list should be assigned a unique identification code that is standardized across states.

Currently, landings data in fish tickets do not include a variable measure of fishing effort. Instead, researchers must rely on proxies such as number of vessels, or total catch, or use logbooks, which are not available for most fisheries. Adding a variable measure of fishing effort, such as days fished during a commercial fishing trip, would make the fish tickets much more useful for economic analysis.

Bycatch has become a central issue in West Coast fisheries management, and the groundfish trawl logbooks have been an important tool for analyzing bycatch. Logbook programs have been started in other fisheries (e.g. market squid, and non-trawl/nearshore groundfish in California). Logbooks are a primary source of information on the spatial distribution of catch and fishing effort.

Model Development

In addition to the valuation models for recreational fisheries that are described above, comprehensive models of CPFV fleet dynamics are needed that reflect multi-species nature of the fishery, economic incentives of CPFV operators to provide not just fish but a "fishing experience", and adaptations of CPFVs to regulatory, market and environmental conditions. Such models could be used to determine whether CPFV fleet dynamics yield single-species

¹ Pacific Council 2005. Social science in the Pacific Fishery Management Council process. Pacific Fishery Management Council, Portland, Oregon 97220-1384. July 2005.

CPUEs that can reasonably be used as an index of relative abundance for that species.

Computable bioeconomic models of fishing effort that are spatial and include effects of ex-vessel prices and climate (e.g. sea surface temperatures, sea level pressure) are also needed to predict effects of changes in regulatory, habitat, environmental and market constraints on participation and harvest in the ocean commercial, ocean sport, tribal and in river sport salmon fisheries. These models could also be used to aid bycatch estimation in non-trawl fisheries, for different species of concern including marine mammals, birds, sea turtles, and others.

A model and data are needed to analyze the transition from an open access fleet to a limited entry fleet. The model would be used to evaluate regional economic impacts, and effects on costs and earnings of the fleet.

An important area for research is to develop models and data to evaluate the economic dependency of coastal communities on fishery and marine resources and the linkages between these industries and the broader regional economy. This type of analysis should be developed to the point of incorporating general equilibrium effects, and linked to participation and bioeconomic factors.

Analysis

At least two retrospective analyses of recent events are needed to determine socioeconomic effects of

- Rockfish Conservation Areas on commercial and recreational fisheries and fishing communities,
- The trawl vessel buyback program on related fisheries, and on fishing communities (including fishery infrastructure).

A holistic perspective has been emphasized recently in marine resource management (e.g. ecosystem-based management). In light of this perspective, a characterization is needed of all commercial and recreational fisheries within the California Current Ecosystem, including spatial distribution and identification of behavioral linkages among complementary and substitute fishing activities. In addition, an analytical framework that accounts for dynamic and inter-regional interactions among industries and households would improve estimates of economic impacts, and the analysis of costs and benefits among management alternatives. A workshop is needed to examine alternative economic models and analytical frameworks.

Finally, stated preference surveys and other non-market valuation techniques could be used to estimate existence or other nonuse values associated with threatened and endangered species, ecosystem protection, and stock rebuilding plans.

7.0 ECOSYSTEM BASED FISHERIES MANAGEMENT AND MARINE PROTECTED AREAS

7.1 Ecosystem Based Fisheries Management

These suggestions are based on the presumption that Ecosystem Based Fisheries Management (EBFM) would be an evolutionary process rather than a revolutionary process. We also suggest that almost any movement towards EBFM will involve more spatially explicit management, whether through use of marine protected areas (MPAs) or in recognition of fine scale stock structure and spatial process affecting recruitment. Field and Francis (in press) suggest three key elements of an ecosystem based approach:

1. Increasing use of short and long term climate and ocean status, trends, and scenarios for the California Current ecosystem.
2. Consideration of trophic interactions among all species, both fished and unfished, and the associated impacts on ecosystem structure and function.
3. The increasing application of new management approaches, including spatial management measures to protect life history characteristics, biodiversity, and complex stock structure.

To begin moving towards these objectives, the following data and research priorities are suggested:

7.1.1 *Climate and ocean status and trends*

- Provide indices of upwelling, El Niño, Pacific Decadal Oscillation, Sea Surface Temperature, etc. on spatial scales relevant to management.
- Provide indices of zooplankton abundance on the same spatial scales
- Provide larval and juvenile fish abundance indices on the same spatial scales
- Support research to evaluate fisheries and ecosystem responses to different climate conditions and both oceanographic and zooplankton indices (this would include groundfish, coastal pelagics, highly migratory species, and salmon)
- Assimilate the above into a status of the ecosystem report useful for management decisions

7.1.2 *Demographics, Trophic Interactions, Life History and Biocomplexity*

- Provide total catch, abundance and status of both target and non target species and their prey and predators on finer spatial scales. Appropriate demarcation points might be Point Conception, Point Año Nuevo, Cape Mendocino, Cape Blanco, Columbia River, Cape Flattery.
- Estimate total annual production for the California Current System (CCS).

- Provide total annual surplus production index for CCS.
- Estimate total population size of higher level carnivores, including sea birds and marine mammals and estimate forage needs and foraging efficiencies (to provide an estimate of not only their food requirements, but the prey density needed for them to acquire these food resources).
- Provide population demographic and life history report on all exploited species (relative to estimated condition at B_0). Include overall trophic status of the ecosystem.
- Provide status of the habitat report.
- Provide indicators of species diversity and other measures of ecological health and integrity.
- Provide report on trophic interactions among exploited species and model consequences of fishing at various levels on either predators or prey.
- Use of otolith elemental analysis or genetic fingerprinting to determine origin of benthic juveniles and formulate hypotheses on larval dispersal and stock structure.

7.1.3 *Highest priority research and data needs:*

- Provide a status of the ecosystem report to the council annually and begin to develop methods for Integrated Ecosystem Assessments
- Estimate total annual production and surplus production index for CCS
- Provide total catch, abundance and status of both target and non target species and their prey and predators on finer spatial scales. Appropriate demarcation points might be Point Conception, Point Año Nuevo, Cape Mendocino, Cape Blanco, Columbia River, Cape Flattery.
- Estimate total population size of higher level carnivores, including sea birds and marine mammals and estimate forage needs and foraging efficiencies (to provide an estimate of not only their food requirements, but the prey density needed for them to acquire these food resources).

7.2 Marine Protected Areas

In 1999, the Council began a two-stage process to consider marine reserves as a tool for managing groundfish. The first part was a “conceptual evaluation” and the second part was to develop alternatives for consideration. The second phase was to be started only if there was a positive result from the conceptual evaluation.

The first phase (Phase 1 Technical Analysis) ran from the spring of 1999 through September 2000. During this phase, a technical analysis² of marine reserves was prepared and an Ad-Hoc Marine Reserve Committee met to develop recommendations for the Council. Following these efforts, the Council adopted marine reserves as a tool for managing the groundfish fishery.

As part of the first phase, the technical analysis was designed to assist the Council in the conceptual evaluation of the role of marine reserves as a management tool. Four options were developed in considering the implementation of marine reserves. One option was the creation of “*heritage and research reserves*”. The analysis concluded that these “heritage and research” types of marine reserves should be viewed as a supplementary management tool.

The types of research included evaluating the impacts of fishing on marine ecosystems relative to effects caused by natural changes and improving estimates of population parameters for harvested species, thereby directly improving management of the fisheries.

The analysis also noted that these types of small reserves may play a valuable role in fisheries management by serving as “*reference or benchmark sites*” which would provide necessary controls for monitoring local trends in populations and ecosystem processes and would be particularly effective as controls for evaluating the effects of fishing activities in nearby unprotected areas.

In 2004 the SSC completed a white paper entitled “Marine Reserves: Objectives, Rationales, Fishery Management Implications and Regulatory Requirements.”³ This document contains additional recommendations regarding research needs associated with marine reserves and marine protected areas.

The top priority research and data needs related to marine reserves as identified in 2000:

- **Identify type and scale of information needed to conduct stock assessments** after establishment of marine reserves and evaluate the feasibility and cost of collecting such information.
- **Information on the location and type of harvest and effort** relative to a proposed marine reserve area is needed in order to begin to evaluate the degree of impact and effectiveness of the creation of marine reserves. Most harvest information currently collected is not on a fine enough geographic scale to use for evaluation of marine reserves.
- **Research is needed to understand the biological and socioeconomic effects of marine reserves** and determine the extent to which acceptable biological catches would need to be modified when marine reserves are implemented, over the short-term and long-term.

² Pacific Fishery Management Council. 2001. Marine reserves to supplement management of west coast groundfish resources. Phase I Technical Analysis. Prepared by R. Parrish, J. Seger, and M. Yoklavich. 62 pp. Portland, Oregon.

³ Pacific Fishery Management Council 2004. Marine Reserves: Objectives, Rationales, Fishery Management Implications and Regulatory Requirements. Pacific Fishery Management Council, Portland Oregon, 97220-1384.

- **Information on advection of eggs and larva and pre-settlement juveniles.** Particularly emphasis on differences between areas upstream and downstream of major geographical features. This will primarily be a physical oceanographic exercise.
- **Information on the movement of juveniles and adults.** This will primarily be a literature search followed by a biological field program. Little is known about the movement of post settlement juveniles.
- **Knowledge of when in the life cycle density dependent effects occur** is important in the assessment of the effects of marine reserves (as it is in assessing conventional catch management).
- **Increased biological and socioeconomic monitoring of existing marine reserves** and other areas of restricted fishing in order to gain information on current reserves that might be extrapolated to evaluate the creation of additional reserves on the West Coast.

GROUND FISH ADVISORY SUBPANEL REPORT ON UPDATED RESEARCH AND DATA NEEDS

The Groundfish Advisory Subpanel (GAP) reviewed the draft document Research and Data Needs, 2006-2008. In general, the GAP finds the document much improved from previous versions and we compliment the authors on the hard work that went into completing the document.

In regards to specific recommendations, the GAP suggests:

1. More clearly define the 5 criteria listed on page 3 that were used to guide the selection and prioritization of research and data projects. For example, the first criteria says “Projects address long-term fundamental problems of west coast fisheries.” The long-term fundamental problems of west coast fisheries should be defined here.
2. Link the five ranking criteria found on page 3 with the research and data needs that have been identified within the document so there is some cohesion between the projects and their ranking of importance.
3. Cooperative/collaborative research should be identified as an emerging issue for Groundfish. Opportunities as well as disincentives for collaborative research should be discussed. Opportunities would include some of the ongoing rockfish research projects in the state of Oregon. Disincentives would include the reality that much of the cooperative research work that is currently ongoing is not making it into the models or stock assessment process on a timely basis.
4. There should be an emphasis in the document used to drive improvements to the stock assessment process, notably addressing uncertainties to improve models and data.
5. US/Canadian research projects and/or workshops should be added to the document for reference.
6. In all cases where specific ongoing research is occurring, the name of the agency or organization completing the work should be listed.
7. Priority should be given to non-extractive survey development and implementation.

The GAP is comfortable that a final draft of the document that incorporates the seven suggestions above should be distributed in December 2007.

GROUND FISH MANAGEMENT TEAM REPORT ON RESEARCH AND DATA NEEDS FOR 2007-2008

The Groundfish Management Team (GMT) reviewed the Research and Data Needs document for 2006-2008 and had the following comments. First, the GMT noted that much of the ongoing research efforts that are of a high priority to the GMT (such as ongoing demographic and habitat association research on canary rockfish, recreational mortality and barotraumas studies) are not explicitly mentioned in the groundfish section of this document. Instead, the research and data needs described in the groundfish section tend to be broadly defined, with a modest number of specific examples. The GMT did wish to highlight several more general priorities for this document.

Chapter 2.0 Groundfish Fishery Management Plan

Non-extractive research and monitoring

The GMT recognizes a growing need to supplement existing surveys with means of estimating abundance and biomass trends that have a lesser impact on resources, as well as those that cover habitat not traditionally indexed by trawl surveys. This is particularly true given the relatively high impact of extractive surveys on some rebuilding resources and the long time range associated with rebuilding trajectories (the research catch of canary rockfish in 2006 represents 17% of the optimum yield for canary rockfish, and the rebuilding time is estimated at well over 50 years). Due to the importance of monitoring stock trends with existing surveys, the GMT recognizes that this is a longer-term, strategic objective. While non-extractive survey data have been used in several groundfish assessments (hydroacoustic, larval abundance, and visual surveys have been used for Pacific hake, bocaccio, and cowcod, respectively), novel methods for other species will require time to develop, implement, and calibrate to existing time series.

Yelloweye Rockfish

The GMT strongly supports the continuation and enhancement of the International Pacific Halibut Commission's annual hook-and-line survey as a means to collect yelloweye rockfish data for consideration in yelloweye stock assessments. Additional, non-extractive research projects focused on yelloweye abundance and distribution should also be pursued. The catch data time series has been truncated for this stock in recent years as management measures, particularly in commercial longline and recreational fisheries, have greatly reduced and/or prohibited the retention of yelloweye rockfish. Absent new and/or enhanced research data, future stock assessments for yelloweye rockfish could be forced into a continuous "update" status. The GMT requests that these specific recommendations be included in this document.

Future Assessments

During the planning process for the 2007 assessment cycle, both the GMT and the Scientific and Statistical Committee recognized that more strategic planning for future assessment cycles should be undertaken, in order to more appropriately initiate data collection, port sampling, ageing and other biological studies at the stock or species level. For stocks that may be candidates for full assessments in the future, this should include reviews that would evaluate economic and biological criteria, as well as the availability of data. This should also include the

consideration or development of methodologies for evaluating the status of data-poor species for which the data requirements necessary to conduct full assessments are unlikely to be met.

Data Needs

The draft document correctly identified the acute need to improve the timeliness of landings and discard data. In particular, the GMT would like to see improvements in collaborative efforts that facilitate refinement of spatial management measures, such as data and analyses that help identify areas in which available target species might be accessed with acceptable impacts on overfished species. Similarly, data and analyses that allow for quantifying bycatch rates for particular target strategies (for example, strategies that target healthy species such as chilipepper or yellowtail rockfish) are also necessary to realize Council objectives.

Transboundary Issues

The GMT notes that under the “Stock Assessment Modeling” subheading, both the Terms of Reference for groundfish stock assessments and Stock Assessment Review Panels have repeatedly identified the need to consider transboundary issues for many stocks, such as blackgill, canary, widow and yelloweye rockfish. The GMT recommends adding language to this effect in this section.

Biological Information and Habitat Concerns

Several of the research needs outlined in the groundfish research priorities, such as conducting food habits studies to determine trophic interactions, and recommendations related to the merits of marine protected areas as management tools, may be better suited to Chapter 7 on ecosystem-based fisheries management and marine protected areas.

Chapter 6.0 Economics and Social Science Components

Information Pertaining to Fishing Behavior

The GMT recognizes that prosecution and management of fisheries involves appropriate consideration of socioeconomic issues. The GMT spends considerable time discussing the potential for changes in fishing effort magnitude and fishing effort location and believes that increased information and model development pertaining to fishery participation and spatial behavior would help to more accurately predict overall catch levels as well as to determine economic and social impacts to fishery participants and fishing communities.

Fishing Communities

The GMT and the Council spent significant time during the Amendment 16-4 process discussing the term “needs of fishing communities” in order to follow the Magnuson-Stevens Act mandates on rebuilding. The GMT believes that socioeconomic research that furthers the understanding of community needs would help future Council decisions pertaining to rebuilding depressed stocks.

GMT Recommendation

Include language that reflects these priorities, select draft language is included as Attachment 1.

Attachment 1: Proposed Language for Research and Data Needs Document

1. In the section entitled “Develop methods, programs, or analytical tools to quantify amount of groundfish discarded by various fishing sectors,” add language to the effect of “Continued improvements in facilitating timely access to the information and data collected by WCGOP necessary to implement Council objectives remains a high priority. This would aid in analyses that help identify areas or fishing strategies in which available target species might be accessed with focused target fishing strategies, or within particular regions, with acceptable impacts on overfished species.”
2. In the section entitled “Resource Assessment Surveys,” ensure that language to the effect of the following is included; “Given the low estimates of potential yield and the long rebuilding trajectories for many rockfish, particularly yelloweye and canary rockfish, there is a particular need to supplement existing surveys with means of estimating abundance and biomass trends that have a lesser impact on resources, and that survey habitat not traditionally indexed by trawl surveys. The continuation and enhancement of the International Pacific Halibut Commission’s annual hook-and-line survey as a means to collect yelloweye rockfish data for consideration in yelloweye stock assessments is also a high research priority, given the truncation of catch per unit of effort time series from targeted longline and recreational fisheries.”
3. In the section entitled “Stock Assessment Modeling”, add a bullet to the effect of “Many stock assessments utilize artificial boundaries to delineate stocks, in particular those associated with international boundaries. While such assumptions are difficult to avoid in many cases, investigations regarding the implications of stock structure and population connectivity of transboundary resources has been highlighted by review panels as a key research priority in 2005 assessments of blackgill, canary, widow, and yelloweye rockfish, as well as in past review panels for other species. Investigations such as genetic methods to provide insights on stock structure, and modeling scenarios that could consider the implications of transboundary stock structure, remain critically important research needs.”

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON UPDATED RESEARCH AND DATA NEEDS

The Scientific and Statistical Committee (SSC) discussed the current version of Research and Data Needs 2006-2008. Some points of the discussion included:

- A statement about the need for data on the size composition of recreational discards will be added to Sec. 2.2 (under “Fishery Monitoring and Data Collection”).
- The term “harvest refugia as a potential management tool” in Sec. 2.2 (under “Habitat”) will be clarified, and this statement will be moved to Sec. 7 (EBFM and MPAs). The statement on trophic interactions in Sec. 2.2 will also be moved to Sec. 7.
- The description of survey methods for rockfish in Sec. 2.2 (under “Resource Assessment Surveys”) will be revised to include consideration of the costs and benefits of these methods. Text in this subsection about the development of non-extractive methods for groundfish assessment will be revised to highlight the need for evaluation of these methods.
- A statement on the need to investigate the accuracy and precision of recreational catch and effort estimates among minor fishing modes (e.g. beach/bank, private access, night fishing) will be added to Sec. 2.3 (under “Fishery Monitoring and Data Collection”).
- A statement citing recent genetic work, which indicates that vermilion and blue rockfish may each represent two distinct but morphologically similar species, will be added to Sec. 2.2 (under “Biological Information for Fishery and Productivity Parameters”). Additional investigations of species classifications for other rockfish are also desirable. Another statement will be added to this subsection that cites the need for better estimates of discard mortality in nearshore waters. In particular, effects of barotrauma may vary among species, as could their ability to survive hooking or trapping injuries. Also, there may be long-term physiological effects due to capture and release on reproductive output, which could have stock productivity and management implications.

The SSC recommends that its subcommittee chairs work with Council staff to implement the revisions listed above, and incorporate comments from the Coastal Pelagic Species Management Team and Coastal Pelagic Species Advisory Subpanel (agenda item B.2.b). With these changes, the SSC considers the document to be ready for adoption.

HABITAT COMMITTEE REPORT ON UPDATED RESEARCH AND DATA NEEDS

The Habitat Committee (HC) reviewed the draft Research and Data Needs document and has the following proposed edits:

- In the introduction (page 1), the document should reference the National Marine Sanctuary Program (which is a part of NOAA) and the academic community as potential partners in research implementation. We recommend that the Council use this document to work with the sanctuary program to identify common research objectives. We will need support and collaboration from all our partners (other Federal and Non-Federal entities) to meet these research and data needs.
- On pages 4, in the Groundfish Fishery Management Plan (FMP) section, the second bullet beginning, “Map benthic habitat...” should be modified to state, “Map benthic habitats within Federal and State waters...” to reflect the need for appropriate mapping in both areas.
- On page 9 under Section 3, the HC suggests the topic sentence (in bold) be modified from, “3. Encourage development of probabilistic habitat-based models that incorporate environmental variation to establish harvest policies and enable risk assessment for fishing strategies.” to say, “3. Encourage development of probabilistic habitat-based models that incorporate environmental variation and anthropogenic disturbances to establish harvest policies and enable risk assessment for fishing strategies.”
- Under salmon FMP, “limiting factors” section (Page 11, first full paragraph), there is no mention of dams in the list of limiting factors. Dams should be added.
- Support the ecosystem section as outlining priorities that are necessary foundational steps towards a longer-term objective of ecosystem management. On page 34, Section 7.1, in the last sentence beginning “to begin moving toward these objectives...” add the phrase “and explicitly incorporating habitat and climatic factors in our fishery management models...” after the word “objectives.”
- On page 35, we suggest adding a section (changing the current Section 7.1.3 to 7.1.4) that reads, “3. Encourage development of probabilistic ecosystem-based models that incorporate environmental variation and anthropogenic disturbances to establish harvest policies and enable risk assessment for fishing strategies.”

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL STATEMENT ON
UPDATED RESEARCH AND DATA NEEDS

The Coastal Pelagic Species Advisory Subpanel (CPSAS) reviewed the document *Research and Data Needs, 2006-2008* (Agenda Item B.2.a, Attachment 1) and notes that, unlike the *2006 Coastal Pelagic Species Stock Assessment and Fishery Evaluation*, the draft does not include a recommendation to review the harvest control rules for Pacific sardine and Pacific mackerel. The CPSAS agrees with the CPSMT that these research needs should be included in the final draft of the document.

PFMC
10/20/2006

COASTAL PELAGIC SPECIES MANAGEMENT TEAM STATEMENT ON
UPDATED RESEARCH AND DATA NEEDS

The Coastal Pelagic Species Management Team (CPSMT) reviewed the document *Research and Data Needs, 2006-2008* (Agenda Item B.2.a, Attachment 1) and recommends additions to the following sections regarding Pacific sardine and Pacific Mackerel:

PACIFIC SARDINE

Continuing Issues:

3. Continued support of the newly adopted CPS Observer Program and in particular, bolstering sample sizes (spatially and temporally) to ensure an adequate number of trips are ‘observed’ to produce statistics that are representative of the fishing fleets at large.
4. Re-examination of the maximum sustainable yield (MSY) control rule utilized in the Pacific sardine Fishery Management Plan (FMP). Given substantial amounts of additional sample data have accumulated since the initial research that was undertaken to formally establish this harvest strategy, it would be prudent to conduct further simulation modeling work to address particular parameters included in the overall control rule (including ‘cutoff,’ ‘fraction, and ‘distribution’ values).

PACIFIC MACKEREL

Continuing Issues:

2. Continued support of the newly adopted CPS Observer Program and in particular, bolstering sample sizes (spatially and temporally) to ensure an adequate number of trips are ‘observed’ to produce statistics that are representative of the fishing fleets at large.
3. Re-examination of the MSY control rule utilized in the Pacific mackerel FMP. Given substantial amounts of additional sample data have accumulated since the initial research that was undertaken to formally establish this harvest strategy, it would be prudent to conduct further simulation modeling work to address particular parameters included in the overall control rule (including ‘cutoff,’ ‘fraction, and ‘distribution’ values).

LEGISLATIVE MATTERS

The Legislative Committee (Committee) is scheduled to meet Monday, November 13 at 7:00 p.m. with a primary objective to review federal legislative issues regarding reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

The Committee last met at the June 12-16, 2006 Pacific Fishery Management Council (Council) and reviewed Federal legislation in the U.S. House of Representatives and the U.S. Senate regarding the MSA reauthorization. The Council adopted the Committee's recommendation that Council comments regarding H.R. 5018, the *American Fisheries Management and Marine Life Enhancement Act* be reiterated to appropriate Congressional contacts. On August 16, 2006, Council Executive Director, Dr. Don McIsaac sent letters to U.S. Senator Ted Stevens and U.S. Congressman Richard Pombo emphasizing key omissions in H.R. 5018 and S. 2012, the *Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2005* (Agenda Item B.3.a, Attachment 1 and Attachment 2). Regarding H.R. 5018, the Council was disappointed with the removal of language addressing the competing statutes of the MSA and the National Marine Sanctuaries Act and remains supportive of the position of the Regional Fishery Management Council Chairs in this matter. Regarding S. 2012, the Council noted the omission of clarification on fishery management authority in national marine sanctuaries, reiterated its opposition to the bill's arbitrary ten-year rebuilding time frame for overfished species as well as the bill's catch overage provision.

To provide detailed comments to Congress regarding catch overage provisions, Council staff developed a position paper entitled "*A Catch Overage Deduction Mechanism As a Legislative Fix to Correct of Overfishing: A Pacific Council staff Perspective on Accounting Quandaries and Science-related Issues*" (Agenda Item B.3.a, Attachment 3). This paper was widely distributed to Congressional contacts, the Council family, and the public.

In June of 2006, it was anticipated that MSA reauthorization would move through a Conference Committee of the U.S. Senate and the U.S. House of Representatives and become law in the fall of 2006. The Council Chairman and Executive Director were directed to convey Council positions should such activity occur between meetings of the Committee or the Council. Such Congressional activity has not occurred; proposed Federal legislation has yet to be passed by the U.S. House of Representatives and therefore a Conference Committee has not yet been established.

The Council is tasked with considering its Legislative Committee recommendations on these and other legislative matters and responding, as appropriate.

Council Action:

Consider recommendations of the Legislative Committee.

Reference Materials:

1. Agenda Item B.3.a, Attachment 1: August 16, 2006 Letter Regarding MSA Reauthorization from Dr. McIsaac to the Honorable Ted Stevens, U.S. Senate.
2. Agenda Item B.3.a, Attachment 2: August 16, 2006 Letter Regarding MSA Reauthorization from Dr. McIsaac to the Honorable Richard Pombo, U.S. House of Representatives.
3. Agenda Item B.3.a, Attachment 3: *A Catch Overage Deduction Mechanism As a Legislative Fix to Correct of Overfishing: A Pacific Council staff Perspective on Accounting Quandaries and Science-related Issues.*

Agenda Order:

- | | |
|---|-------------|
| a. Agenda Item Overview | Mike Burner |
| b. Legislative Committee Report | Dave Hanson |
| c. Reports and Comments of Advisory Bodies | |
| d. Public Comment | |
| e. Council Action: Consider Recommendations of the Legislative Committee | |

PFMC

10/25/06

PACIFIC FISHERY MANAGEMENT COUNCIL

August 16, 2006

The Honorable Ted Stevens
United States Senate
522 Hart Senate Office Building
Washington, D.C. 20510

Dear Senator Stevens:

The Pacific Fishery Management Council (Pacific Council) appreciates the opportunity to comment on S. 2012, the *Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2005*. The Pacific Council and its Legislative Committee recently met June 12-16, 2006 in Foster City, California and requested that I convey the following comments supplemental to my letter to you dated May 15, 2006. This letter first speaks to a correction in the May, 15, 2006 letter and then offers comment to the content of S. 2012. The Pacific Council has not reviewed S. 2012 as passed by the U.S. Senate on June 19, 2006. However, it appears the thrust of these comments applies to the staff working draft, Committee and full Senate S. 2012 versions.

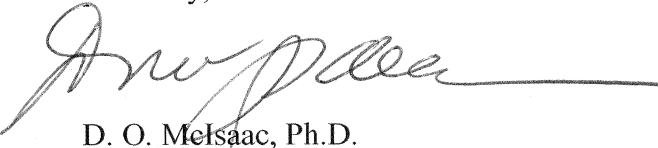
Language in the Pacific Council's May 15, 2006 letters to yourself and Congressman Richard Pombo (R-California) regarding U.S. representation under the Western and Central Pacific Fisheries Convention (WCPFC) did not properly describe the intent of the Pacific Council. The proper intent was to ensure Pacific Council and WPFMC interests in the region were both represented under the WCPFC. The Pacific Council regrets any misunderstanding and requests the position conveyed in this letter supplant the May 15, 2006 language regarding this matter. Specifically, the Pacific Council is concerned with those provisions in the December 13, 2005 staff working draft S. 2012, Title V, the *Western and Central Pacific Fisheries Convention Implementation Act* which adds a Western Pacific Fishery Management Council member as a United States Commissioner but, not a Pacific Council member. The Pacific Council notes significant West Coast interest in the WCPFC because 1) the fish stocks caught under Pacific Council jurisdiction also migrate into WCPFC waters and 2) many of the vessel owners, fisherman, and processors who participate in these fisheries or who maintain fishery support facilities in the Western Pacific are based on the West Coast. The Pacific Council recommends legislative language making it clear there is Commission-level representation for both the Pacific and Western Pacific Fishery Management Councils.

The Pacific Council would like to emphasize two omissions from S. 2012, and provide more detailed comment on the catch overage penalty provision in S. 2012. The omissions are (1) not removing the arbitrary ten-year rebuilding time frame for overfished species and (2) clarification on fishery management authority in national marine sanctuaries. In short, the rationale for these two omissions are as follows: (1) the ten-year rebuilding provision is inappropriately short for long lived species, inappropriately long for short lived species, and can cause fishery havoc for

species on the cusp of 10 year longevity biology; in any case a 10 year provision is arbitrary, and (2) Councils need to have authority for fishing regulation throughout their jurisdiction to provide for consistent and contiguous fishery management throughout the ecosystems of their jurisdiction. More detailed recommendations on these two omissions can be found in the Magnuson-Stevens Fishery Conservation and Management Act reauthorization positions on these matters adopted by Regional Fishery Management Council Chairs in April 2005, previously provided to you.

Beyond what is described above, the Pacific Council comments previously submitted stand. We have also sent, under separate cover for your consideration, an August 16, 2006 letter to U.S. Congressman Pombo which clarifies the Pacific Council's comments on H.R. 5018. Thank you again for providing the Pacific Council an opportunity to provide comments on these important matters. If you or your staff have any questions about this letter, please contact me or Mr. Mike Burner, the lead Staff Officer on this matter at 503-820-2280.

Sincerely,



D. O. Melsaac, Ph.D.
Executive Director

MDB:ckc

c: U.S. Congressman Barney Frank
U.S. Congressman Wayne Gilchrest
U.S. Congressman Richard Pombo
U.S. Congressman Nick Rahall
U.S. Congressman Don Young
U.S. Senator Barbara Boxer
U.S. Senator Maria Cantwell
U.S. Senator Dianne Feinstein
U.S. Senator Daniel Inouye
U.S. Senator Patty Murray
U.S. Senator Gordon Smith
U.S. Senator Olympia J. Snowe
U.S. Senator David Vitter
U.S. Senator Ron Wyden
Pacific Fishery Management Council Members
Regional Fishery Management Council Executive Directors
Mr. Drew Minkiewicz, Senate Committee on Commerce, Science and Transportation
Mr. Matthew Paxton, Senate Committee on Commerce, Science and Transportation
Ms. Margaret Spring, Senate Committee on Commerce, Science and Transportation

Mr. Dave Whaley, House Subcommittee for Fisheries Conservation, Wildlife, and Oceans

Ms. Elizabeth McDonnell, Legislative Assistant, Senator Gordon Smith

Mr. Casey Sixkiller, Environment Legislative Assistant, Senator Patty Murray

Dr. John Coon, Deputy Director, Pacific Fishery Management Council

Staff Officers, Pacific Fishery Management Council

PACIFIC FISHERY MANAGEMENT COUNCIL

August 16, 2006

The Honorable Richard Pombo
Chairman, Committee on Resources
United States House of Representatives
2411 Rayburn House Office Building
Washington D.C. 20515

Dear Congressman Pombo:

The Pacific Fishery Management Council (Pacific Council) and its Legislative Committee met June 12-16, 2006 in Foster City, California and reviewed my verbal and written testimony from the May 3, 2006 hearing on H.R. 5018, the *American Fisheries Management and Marine Life Enhancement Act* and H.R. 1431, the *Fisheries Science and Management Enhancement Act of 2005*, as well as H.R. 5018 as amended by the U.S. House Committee on Resources on May 17, 2006. The Pacific Council approved the reports of its Legislative Committee, which includes a section-by section review of H.R. 5018, and directed me to convey the following comments.

The Pacific Council was discouraged by the removal of language in H.R. 5018, Section 10 regarding the competing statutes of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the National Marine Sanctuaries Act (NMSA). The Pacific Council would like to reiterate its recommendation that the positions on these matters adopted by Regional Fishery Management Council (RFMC) Chairs in April 2005 be included in MSA reauthorization legislation. The Council notes that prior to amendment on May 17, 2006, H.R. 5018 was the only proposed MSA reauthorization legislation addressing fishery management authority in national marine sanctuaries. The Council strongly recommends this issue be resolved through Federal legislation in the very near future via reauthorization of both the MSA and NMSA.

Upon review of the Legislative Committee comments contained in my May 15, 2006 letter regarding H.R. 5018, the Pacific Council notes that many of the detailed comments have not been addressed in the latest version of the bill. It is assumed that the May 17, 2006 U.S. House Committee on Resources meeting was focused on broader issues during the immediate time frame of moving a legislation out of Committee. Therefore, the Council would like to reiterate the Pacific Council's detailed comments on H.R. 5018 previously submitted.

Additional Input

We understand you will consider the content of S. 2012, the *Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2005* and other proposed legislation as you proceed with development of H.R. 5018. We have also sent, under separate cover for your consideration, an August 16, 2006, letter to U.S. Senator Ted Stevens which includes Pacific Council comments on S. 2012 included in the Council concerns about S. 2012 is the catch overage penalty provision.

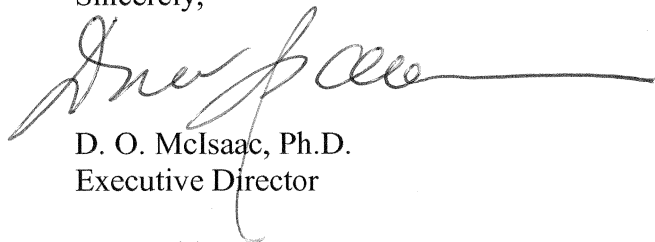
Language in the Pacific Council's May 15, 2006 letters to yourself and U.S. Senator Ted Stevens (R-Alaska) regarding U.S. representation under the Western and Central Pacific Fisheries Convention (WCPFC) did not properly describe the intent of the Pacific Council. The proper intent was to ensure Pacific Council and WPFMC interests in the region were both represented under the WCPFC. The Pacific Council regrets any misunderstanding and requests the position conveyed in this letter supplant the May 15, 2006 language regarding this matter.

Specifically, the Pacific Council is concerned with those provisions in the December 13, 2005 staff working draft S. 2012, Title V, the *Western and Central Pacific Fisheries Convention Implementation Act* which add a Western Pacific Fishery Management Council member as a United States Commissioner but, not a Pacific Council member. The Pacific Council notes significant West Coast interest in the WCPFC because 1) the fish stocks caught under Pacific Council jurisdiction also migrate into WCPFC waters and 2) many of the vessel owners, fisherman, and processors who participate in these fisheries or who maintain fishery support facilities in the Western Pacific are based on the West Coast. The Pacific Council recommends legislative language making it clear there is Commission-level representation for both the Pacific and Western Pacific Fishery Management Councils.

In addition to WCPFC representation, the Pacific Council and its Legislative Committee discussed inequitable burdens placed on U.S. fisheries to rebuild depleted stocks harvested at the international level. The Pacific Council is encouraged by language in S. 2012 Section 406, *International Overfishing and Domestic Equity* regarding this manner and recommends similar language be included in final legislation to reauthorize MSA.

Thank you again for providing the Council an opportunity to provide comments on these important matters. If you or your staff have any questions about this letter, please contact me or Mr. Mike Burner, the lead Staff Officer on this matter at 503-820-2280.

Sincerely,



D. O. McIsaac, Ph.D.
Executive Director

MDB:rdd

c: U.S. Congressman Barney Frank
U.S. Congressman Wayne Gilchrest
U.S. Congressman Nick Rahall
U.S. Congressman Don Young
U.S. Senator Barbara Boxer
U.S. Senator Maria Cantwell
U.S. Senator Daniel Inouye
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Ms. Margaret Spring, Senate Committee on Commerce, Science and Transportation
Mr. Dave Whaley, House Subcommittee for Fisheries Conservation, Wildlife, and
Oceans
Dr. John Coon, Deputy Director, Pacific Fishery Management Council
Staff Officers, Pacific Fishery Management Council

A Catch Overage Deduction Mechanism As a Legislative Fix to Correct for Overfishing:

**A Pacific Council Staff Perspective on Accounting Quandaries and
Science-related Issues**



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October 2006

A Catch Overage Deduction Mechanism As a Legislative Fix to Correct for Overfishing:

A Pacific Council Staff Perspective on Accounting Quandaries and Science-related Issues

SUMMARY

The Pacific Council is on record for not supporting the proposed catch overage deduction provision as described in S. 2012. This paper calls attention to the provision's (1) serious accounting dilemmas and (2) conflict with use of the best available science in fisheries management. The paper presents analysis and specific examples for the matters listed below.

Accounting Quandaries

- Finalizing catch data can take years.
- Implementing a penalty provision in an orderly manner can take longer than the proposed timelines.
- The intended meaning of “specified annual catch limit” is unclear and could create a massive ledger system.

Science-Related Issues

- Stock assessments using the best available science already take overages into account.
- The biology of some short-lived species does not fit the proposed payback mechanism.
- The lack of an underage provision can break the scientific link to a biological justification for the proposed provision.
- Penalizing for overages at the sector level can also break the scientific link to a biological justification.
- Changes in the stock assessments of medium and long-lived stocks can break biological connectivity between catch impacts and stock condition.

Introduction

Senate bill 2012 proposes amending the Magnuson-Stevens Fishery Conservation and Management Act (MSA) to include a provision that requires overharvest of a stock in one year be “paid back” by subtracting that overage amount from a future year’s allowable harvest. Specifically, S. 2012 proposes revision to the fishery management plan requirements section of the MSA by adding the following:

(16) establish a mechanism under which harvests exceeding the specified annual catch limit (including the specified annual catch limit for a sector) shall be deducted in the following fishing year, or the next action in a multiyear specification that establishes or adjusts annual catch limits (including those specified for that sector), and which may use the type of adjustment measures already relied on in the plan, unless sufficient information on the harvest level cannot be obtained in that timeframe, but the deduction shall occur not later than 3 fishing years after the close of the fishing year in which the overage occurs.”

This provision initially may seem a reasonable manner in which to correct the unintended impact of overfishing on a stock. The implied logic in the provision is that management of a fish stock is comparable to managing a budget, and that the overage can be corrected in a reciprocal fashion – if one spends over what had been planned for a given year, that amount can be subtracted from the next year’s spending and the budget is again balanced. However, such a simplified approach does not fit sophisticated fisheries management because the biology of a fish stock does not follow a simple financial transactions model, and the best way to estimate the total catches and instantaneous size of a fish stock is far more complex than instantaneous money accounting. In addition, despite dramatic improvements in recent years, there is still often a large amount of variability around estimations of total catch and of current stock size. Given this, applying the provision becomes an arbitrary action that impedes the use of sound science and adds unwarranted, perhaps undoable, complexity to an already complex management system.

The Pacific Council is on record for not supporting this catch overage deduction provision.¹ This paper calls attention to the provision’s (1) serious accounting dilemmas and (2) conflict with use of the best available science in fisheries management.

Accounting Quandaries

Implementation of this concept presents several accounting quandaries. Finalizing the number of fish caught, including fish brought to the shore as landed catch and mortality of fish released at sea, can take years– so long that continuity between the actual “penalty” and the intended correction can be lost. The current catch accounting protocols do not provide for orderly implementation of the timelines proposed. The current language has definitional ambiguity that could, if taken to the most finite “catch limits” used in the Pacific Council arena, cause a large number of complex, multiplicative ledgers with various difficulties to implement.

Finalizing catch data can take years.

¹ Passage of Motion 24 at the June 2006, Pacific Council Meeting, to approve recommendations numbered one through five in Agenda Item B.3.b, Supplemental Legislative Committee Report; all votes in favor with one abstention.

For West Coast groundfish, the collection and transcribing of observer data and landings information about thousands of commercial vessels and over a million angler trips coastwide is complicated by the number of different state and federal data collection processes currently in place, and the disparate characteristics of numerous sectors and regions, among other issues. As a result, final quality controlled estimates of total catch (landings plus at-sea discard mortality) are not available from the National Marine Fisheries Service (NMFS) until a year or more after the close of the fishing year. Landings data may continue to be revised for many years after that. While the time lag differs by fishery management plan species groups, it is generally longer for groundfish and highly migratory species than salmon or coastal pelagic species. The lack of contiguity can have the effect of losing connection between the fishery year and the penalty implementation year due to events that take place in the intermediate years, such as data finalization procedures, new stock assessments, and adjustments in fishing intensity.

Example: In September 2004, the Council became aware that West Coast fisheries were on track to exceed the 240 metric ton (mt) acceptable biological catch (ABC)/optimum yield (OY) of darkblotched rockfish, with an estimated 374 mt total catch if fishing continued as planned. The Council took in-season action to restrict fisheries to a near zero impact on the stock for the remainder of the year, but still anticipated that total catch for 2004 would equal approximately 283 mt, or about 43 mt more than the OY/ABC, due the amount caught before the fishery could be legally closed on September 30. Based on analysis of landing information and observer data on at-sea discards, NMFS reported in May 2006 that the total catch of darkblotched rockfish exceeded the ABC/OY by 1.6 mt, not 43 mt. In September 2006, NMFS revised its analysis of total catch of darkblotched rockfish in 2004, estimated to now have been 230.9 mt, 9.1 mt below the ABC/OY and a reversal in the 2004 overfishing determination. If the catch overage had been deducted from the allowable harvest at any earlier point in this timeline, an unjustified penalty would have been levied.

Date	Best available total catch estimate	Overage/ Underage from ABC/OY
September 2004	283 mt	Over by 43 mt
May 2006	241.6 mt	Over by 1.6 mt
September 2006	230.9 mt	Under by 9.1 mt

Implementing a penalty provision in an orderly manner can take longer than the proposed timelines.

If one presumes it is not appropriate to apply an overage deduction based on preliminary data, or applied in the middle of a fishing year, then it can take many years after an overage occurs to implement a penalty. Application of preliminary data brings forward issues of fairness and multiplicative accounting burdens through years in which data is finalized and a penalty implemented and tracked; application in-season could involve serious disruption issues or even instant closure in some cases. The proposed mechanism states a penalty "...shall be deducted in the following fishing year, or the next action in a multiyear specification that establishes or adjusts annual catch limits...but the deduction shall occur not later than 3 fishing years after the close of the fishing year in which the overage occurs". However, these timelines can be in conflict with both data finalization and orderly setting of seasons in the Pacific Council process.

Example: Harvest levels (OYs and ABCs) and sector management measures (season dates, trip limits, gear restrictions, etc.) for West Coast groundfish fisheries are adopted in a multi-year specification, in two-year increments. Groundfish catch estimates for the

2003 fishing year considered essentially final were available in May 2005. Therefore, implementing a penalty “...in the following fishing year...” for fishing year 2003 would not be possible unless done with preliminary data and done as an in-season measure during 2004 following analysis of the essentially finalized total catch data, in June 2006 the Pacific Council adopted National Environmental Policy Act-compliant management specifications for Secretarial approval for the 2007-2008 fishing years.² Applying an overage deduction for the 2003 fishing year in “...the next action in a multi-year specification...” places implementation in the 2007 fishing year—this four-year lag extends beyond the period of three fishing years currently outlined in the Senate bill. Therefore, implementation of either of the proposed timelines is problematic from a perspective of orderly accounting and implementation.

The intended meaning of “specified annual catch limit” is unclear and could create a massive ledger system.

For the Pacific Council, an “annual catch limit” could refer to an ABC, an OY, a fishery sector bycatch cap or harvest guideline, or catch in a geographic area, among other possible applications. While it is a rare and unexpected situation when an ABC is exceeded in the Pacific Council area, it is very frequent that a smaller specified pre-season catch limit is either exceeded or not achieved. If the proposed mechanism means *any* specified catch limit, the number of potential ledgers tracking overages at the finest level could be inordinately large given the fact that the Pacific Council has four major fishery management plans each with multiple species. The staffing necessary for such a fine level of catch accounting far outstrips current capacity.

Example: The management of West Coast groundfish involves over ninety species, some with a single ABC, more than one OY, and many specified sector or geographic catch limits. In the extreme, there could be 1,240 such reference points for just the groundfish fishery. Additionally, there could be many independent years in play at a given time for each of the specified catch limits.

Science-Related Issues

Stock assessments using the best available science already take overages into account.

A stock assessment is an intricate mathematical model that integrates past total catch information (which would include overages) with dynamic biological parameters to produce projections of future years’ sustainable harvests. Therefore, catch overages, over time, are explicitly taken into account when calculating the projected sustainable harvests. The Pacific Council uses projections from the most recent stock assessment in groundfish management as the biological basis from which to set the stock’s OY. However if the proposed provision was implemented, an overage from one year could be subtracted from future harvests in two separate and duplicative manners: once by subtracting the overage from the harvest limit in accordance with the provision, and once by adopting a (lower) OY derived from the stock assessment that had already taken the overage into consideration. There is no scientific basis for a policy that results in the double-counting of overages.

Example: Canary rockfish is an overfished species that can be caught incidentally in nearly all West Coast groundfish fisheries. Therefore, fishing restrictions to rebuild the stock have significant, wide-ranging impacts for coast-wide commercial and

² The Council took final action on the 2005-2006 biennial specification in June 2004; again, acceptably finalized data for fishing year 2003 was not available at that time.

recreational fisheries and the communities that depend on them. In 2003, the 44 mt OY for canary rockfish was exceeded by 4 mt (though total catch remained far below the ABC of 272 mt). If the overage provision was applied to OYs, the 4 mt could be subtracted at the earliest from the 2007 OY, as the total catch data finalization process for the 2003 catch year became available after decision-making on the 2005-2006 management cycle had concluded. Meanwhile, this overage already was applied in setting the 2007 OY: the 2005 stock assessment included a preliminary estimate of 2003 overage. Overlapping the catch overage deduction provision onto the Pacific Council's current stock assessment practice would have caused the 2003 overage to be double-counted for the 2007 catch year.

While not binding to the proposed statutory language, it is notable that using stock assessments as the appropriate means to take into account harvest overages was upheld in a recent court case, *Natural Resources Defense Council, vs. NMFS*, 421 F.3d 872 (9th Cir. 2005). These conclusions currently apply to not only the Pacific Council's actions, but those of the North Pacific and Western Pacific Fishery Management Councils as well. The plaintiffs contended that, in order to prevent overfishing as required by the MSA, 2002 harvest levels of three overfished species should have been reduced to compensate for previous year's overharvests, arguing that NMFS "was aware that the actual amount of these fish that had been caught in previous years far exceeded the set quotas." The 9th Circuit Court upheld the district court's ruling that: "[The Agency's] decision to maintain harvest limits at their 2001 levels was reasonably connected to — indeed, was dictated by — the agency's policy of resetting harvest limits only after conducting a stock reassessment. In turn, that policy, which is a product of limited resources available to the agency to manage eighty-two different fish species, was neither an abuse of discretion nor contrary to law."

The biology of some short-lived species does not fit the proposed payback mechanism.

For certain short-lived species managed by the Pacific Council, such as the Pacific salmon species, overharvest in one year may not affect the stock size in the penalty year because each is an independent population. In salmon management, the Pacific Council uses preseason projections based on parent year spawning and post-spawning recruitment indicators to set a stock's harvest limit for the upcoming year. Any reduction of this amount due to an overage in the previous year is not biologically linked to the same life cycle lineage, and therefore is not scientifically justified.

Example: Ocean fisheries for coho salmon essentially harvest three year-old individuals in their final year of life (all Pacific salmon die after spawning) and are limited to a fishing level that will allow enough of that year class to return to the spawning grounds and maintain the stock according to established conservation goals. If, for instance, there was overfishing of a particular coho stock in 2005, the under-escapement of spawners that year would be taken into account in subsequent stock assessments and could potentially affect stock abundance in 2008. However, if the catch overage was paid back in 2006³, there would be no remedial effect to the 2005 brood or to its progeny in ocean fisheries in 2008.

³ The time lag between catch year and total catch data finalization differs between species. For salmon, which do not have the observer-based reporting of discard mortality that groundfish do, total catch finalization and is generally sooner and contains less variability in the transformation from a preliminary estimate to a final total.

The lack of an underage provision can break the scientific link to a biological justification for the proposed provision.

As stated earlier, the presumed logic of the proposed provision is to provide biological compensation to a fish stock that experienced a greater level of fishing intensity than planned for in a prior year. However, the payback year may not be contiguous with the overage year due to the length of time between the end of a fishing year and when the final catch estimates are available. It is possible that an overage in one year could leapfrog one or more subsequent years in which there was a catch underage and penalize a successional year when logically unnecessary. The result of this lack of underage provision is that the scientific link to biological justification can be broken⁴. When the scientific linkage is broken, the proposed mechanism appears to have a punitive purpose as opposed to a biologically-based purpose.

Example: Total catch of bocaccio in 2003 was 29 mt, which exceeded the 20 mt OY. Since this total catch value was considered to be essentially final in May 2005, the overage presumably would have been subtracted from the 2007 allowable harvest (the first year in next orderly multi-year specification). Meanwhile, total catches during each of the intermediate years has been well below the OY – 2004 catches were 145 mt less than the 250 OY, 2005 catches are projected to be 201 mt less than the 307 mt, and 2006 catches are projected to be 160 mt less than the 307 OY. Therefore, applying a penalty of 9 mt to the 2006 fishing year would have only a punitive purpose for the overage of the 2003 OY, with no link to a scientifically-based biological compensation purpose.

Penalizing for overages at the sector level can also break the scientific link to a biological justification.

The Pacific Council sets many catch limits for some species in order to help ensure that the adopted ABCs for stocks are not exceeded, including one or more OYs, sector limits, harvest guidelines, and geographic area allotments. If a catch limit in one of the finer strata is exceeded, but the catches are lower than the limits in other categories in an amount greater than the overage, the total ABC would not be exceeded. Thus, in total for this situation, there would have been no overfishing in that particular year and there is no biological basis for subsequent catch reductions.

Example: At the beginning of 2004, the Council placed an informal catch impact limit of 1.4 mt of widow rockfish for the California recreational fishery. Essentially finalized catch data released in May 2006 indicated that the sector in fact took 15.0 mt, an “overage” of 13.6 mt. However, the commercial fisheries and other recreational fisheries took far less widow rockfish than had been anticipated, resulting in a total mortality of 176 mt, or 108 mt less than the 2004 OY. There would be no biological basis for penalizing the California recreational sector in this circumstance.

Changes in the stock assessments of medium and long-lived stocks can break biological connectivity between catch impacts and stock condition.

The size of a medium- or long-lived fish stock is the product of a complex interplay of factors that include past harvest levels and important biological parameters such as natural mortality, growth rate, and the relationship between environmental conditions and proportion of fish that survive to adulthood. Due to the complicated relationship between all of these factors, the impact that catch levels will have on the size of a stock can change from year to year, as reflected in sequential stock assessments. This does not suggest that a catch overage will not have an impact on the stock, but

⁴ It is acknowledged that a string of fishing years with consistent catch overages and no intermediate stock assessment can result in a situation where the proposed mechanism maintains a scientific link to biological justification.

rather that the unintended impact of the overage is not zeroed out by subtracting that same amount from the catch of a future year. Furthermore, changes to the approach taken in a stock assessment, from one year's version to the next, can dramatically alter the projections of sustainable harvest limits over time—independent of how much fishing has occurred. These changes, such as to the assumed values for biological parameters or to the weight given to certain sets of data, can swamp the effects of catches when fishing rates are low, as they typically are for medium and long lived species. In these cases, the biological connectivity between a catch impact in one year compared to a subsequent year is lost, and an overage impact is not zeroed out by simply subtracting that amount from future catch levels.

Example: In 2001, the catch of bocaccio rockfish in commercial and recreational fisheries in which bocaccio were incidentally caught exceeded the OY of 100 mt by about 100 mt. A 2002 bocaccio stock assessment projected a dismal outlook on the stock and caused the OY to drop from 100 mt to 20 mt for 2003. In striking contrast, the 2003 stock assessment provided scientific basis to raise the OY to 400 mt for 2004. This stock assessment was primarily driven by new data on the particularly high number of individuals born in 1999, as well as due to changes to a key biological parameter. This convoluted science and management history, whereby implementing the penalty for a significant 2001 overage could have closed virtually all California sport and commercial fisheries in 2003 or had a much more minor effect in 2004, neither of which were necessary in hindsight, points to the lack of science-based rationale for assuming that catch overages for such stocks can be zeroed out by subtracting the amount from future harvest.

FISCAL MATTERS

The Council's Budget Committee will meet on Sunday, November 12, 2006 at 4:00 P.M. in the Equestrian Room to consider budget issues as outlined in Ancillary A, Budget Committee Agenda.

The Budget Committee's report will be provided to the Council for review and approval on Friday, November 17.

Council Action:

1. Consider recommendations of the Budget Committee.

Reference Materials:

1. Agenda Item B.4.b, Supplemental Budget Committee Report.

Agenda Order:

- a. Agenda Item Overview
- b. Budget Committee Report
- c. Reports and Comments of Advisory Bodies
- d. Public Comment
- e. **Council Action:** Consider Recommendations of the Budget Committee

John Coon
Jerry Mallet

PFMC
10/25/06

BUDGET COMMITTEE REPORT

Budget Committee (BC) Chairman, Mr. Jerry Mallet, called the meeting to order at 4:05 P.M. on November 12, 2006. The following BC members were present:

Mr. Jerry Mallet, Chairman
Mr. Phil Anderson
Mr. Donald K. Hansen

Mr. Mark Helvey
Mr. Frank Lockhart
Mr. Frank Warrens

[Dr. Dave Hanson was absent.]

Chairman Jerry Mallet added Item E, Miscellaneous Issues, to the agenda and Dr. Donald McIsaac proceeded with the Executive Director's Budget Report. The report provided a review of the current status of funding and expenditures for calendar year (CY) 2006 through September 30, 2006, including a projection of the expected year-end balance, and several potential budget scenarios covering a range of possible funding levels for CY 2007.

Current Status of Funding and Expenditures for Calendar Year 2006

Dr. McIsaac reviewed the 2006 budget (\$3,791,000) and expenditures by major category as of September 30, 2006. He noted that the budget has increased from the previous report in September by \$300,000. As reported in the September 2006 BC Report, this additional funding, provided by NMFS Headquarters, is dedicated to support the completion of the Council's dedicated access program (DAP) which culminates in the trawl individual quota (TIQ) and intersector allocation fishery management plan amendments and environmental impact statements. For planning purposes, and setting aside the dedicated access funding which will not be fully obligated in 2006, the current CY 2006 budget report projects a positive year-end balance of about \$110,000 (about 3% of the original budget). Given the current budget uncertainties for 2007, Dr. McIsaac recommended any final realized balance be carried over to help fund CY 2007.

Expectations for Future Funding

With regard to the fiscal year 2007 budget for regional councils, Dr. McIsaac reported that the federal marks include the President's budget at \$18 million, the House at \$16.7 million, and the Senate at \$30 million. Additionally, Dr. McIsaac considered status quo funding at \$15 million as a potential funding level scenario. The Senate mark recognizes the regional councils' fact sheet and request for funding that addresses their current needs and eliminates the need for the additional soft money support they have had to seek in recent years.

Following the election, timing of final action on the federal appropriation bill and what that action might entail is very uncertain. A continuing resolution is currently in effect that limits funding to extremely low levels. Additional continuing resolutions will be in effect to fund activities in the interim until a final Congressional budget is signed by the President. The availability of additional supplemental funding dedicated to the TIQ program is unknown at this time and is also dependent on the final appropriations by Congress.

Given the uncertainty, and setting aside any dedicated funding for the Council's DAP, Dr. McIsaac identified a range of possible CY 2007 Council budget scenarios and potential priorities for BC review and recommendations. Dr. McIsaac identified an estimate of \$3.2 million to maintain 2006 operational capacity in 2007. He then identified potential priorities for reducing or augmenting the budget at possible funding levels below or above the base operational capacity level.

Miscellaneous Issues

Chairman Mallet proposed that for the next meeting, the BC might want to consider the amount of information and level of detail provided to the committee. Is it enough or too much? What changes might the committee desire? Committee members expressed satisfaction with the level of detail provided by the staff and suggested no need for a future agenda item at this time.

Budget Committee Recommendations to the Council

Based on the information provided by Dr. McIsaac in his display of funding scenarios and priorities, the BC recommends the following priorities to guide budget development for CY 2007.

In the event funding exceeds the status quo operational capacity (\$3.2 million), the BC recommends:

1. Reserve any extra funding, up to a total of \$250,000, to cover CY 2008 funding uncertainties.
2. For amounts greater than an additional \$250,000, convene a BC meeting as soon as practical after the funding level is known to determine budget priorities.

In the event funding falls short of the status quo operational capacity (\$3.2 million), the sequence of budget priorities from first to last reductions should be:

Action	Programmatic, Operational and/or Council Staffing Effect
1. Reduce supplies and services budget up to \$57,000.	<ul style="list-style-type: none"> • Loss of some operating efficiencies and staff training opportunities.
2. Reduce ancillary meeting travel up to \$25,000.	<ul style="list-style-type: none"> • Fewer ancillary meetings and less Council member and staff travel.
3. Reduce highly migratory species (HMS) FMP implementation by about half up to \$24,000.	<ul style="list-style-type: none"> • Fewer HMSMT and HMSAS meetings; fewer HMS agenda items at Council meetings.

Action	Programmatic, Operational and/or Council Staffing Effect
4. Transfer staff and required travel, etc., to TIQ funded projects. (Up to 1.0 FTE of the Groundfish Policy Analyst position and 0.65 FTE of the Economist position; up to an overall total of \$158,000.)	<ul style="list-style-type: none"> • Reduces or eliminates work on groundfish projects which transferred staff would otherwise work on. • Slower progress on TIQ projects (A result of less funding for outside contracts for TIQ products and because Economist's work on TIQ position has been funded from Council base funding.)
5. Further reduce supplies and services budget up to \$8,000.	<ul style="list-style-type: none"> • Further degradation of operational efficiencies and staff training opportunities.
6. Rescind 2006 State contract increases up to \$26,000.	<ul style="list-style-type: none"> • Reduces capability of State personnel to participate in Council management and associated degradation of Council performance in achieving implementation of FMPs.
7. Eliminate one GMT meeting outside the Council meeting forum or reduce a GAP meeting to save up to \$9,000.	<ul style="list-style-type: none"> • Further reductions in groundfish projects.
8. Vacate the Groundfish Policy Analyst position and transfer 0.57 FTE of the Groundfish Staff Officer and associated travel, etc. to the TIQ project; up to \$68,000.	<ul style="list-style-type: none"> • Further reductions in groundfish management projects and slowing of TIQ projects.
9. Cancel September Council meeting (\$110,000).	<ul style="list-style-type: none"> • Substantial and serious reductions in Council obligations under the Magnuson-Stevens Act.

In the event the budget shortfall exceeds \$485,000, the BC recommends convening a BC meeting as soon as practical after the funding level is known to determine budget priorities.

PFMC
11/17/06

APPOINTMENT OF COUNCIL OFFICERS AND MEMBERS OF ADVISORY BODIES,
STANDING COMMITTEES, AND OTHER FORUMS, INCLUDING THE 2007-2009
ADVISORY BODY TERM AND ANY NECESSARY CHANGES TO COUNCIL
OPERATING PROCEDURES (COP)

This agenda item requires the Council's decision on the following appointments:

1. Council Chairman and Vice Chairman for the 2007 Term.
2. Salmon Technical Team replacement for the Tribal Government Position.
3. Groundfish Allocation Committee (GAC) replacements for three nonvoting positions:
 - ◆ Open Access Fishery
 - ◆ Pacific Whiting Fishery
 - ◆ Conservation Representative
4. The 2007-2009 Advisory Body Term for:
 - ◆ Coastal Pelagic Species Advisory Subpanel (CPSAS)--all 10 members
 - ◆ Groundfish Advisory Subpanel (GAP)--all 20 members
 - ◆ Highly Migratory Species Advisory Subpanel (HMSAS)--all 13 members
 - ◆ Salmon Advisory Subpanel (SAS)--all 15 members
 - ◆ Habitat Committee (HC)--6 non-agency members
 - ◆ Scientific and Statistical Committee (SSC)—6 at-large members

In addition, the Council welcomes replacements for the following agency positions on advisory bodies:

Enforcement Consultants:

- ◆ Lt. Jeff Samuels replacing Lt. David Cleary as the Oregon State Police, Fish and Wildlife representative
- ◆ Assistant Chief Tony Warrington replacing Nancy Foley as the California Department of Fish and Game (CDFG) representative

Habitat Committee:

- ◆ Stephen M. Turek replacing Michael Rode as the CDFG representative

Council Chairman and Vice Chairman for the 2007 Term

As directed by COP 1, the Council will need to select a chairman and vice chairman for a one-year term beginning January 1, 2007. For the 2006 term, the Council suspended the restriction on page 10 of COP 1, limiting any officer from serving more than two consecutive one-year terms in the same position. Chairman Donald Hansen and Vice Chairman David Ortmann will have each served three consecutive terms in their respective positions at the end of 2006.

Salmon Technical Team

Dr. Gary Morishima has submitted his resignation for the Tribal Government seat on the STT. Council staff has solicited nominations from the tribal governments for a replacement and nominees should be provided for the supplemental materials distribution.

Groundfish Allocation Committee

Nominations to fill two nonvoting positions on the GAC, representing the Pacific whiting and open access fisheries, are provided below. Council staff has also updated COP 7 to reflect the change adopted at the November Council meeting which allows the Council Chairman to make interim appointments of nonvoting members as necessary to assure representation at each meeting.

Nominees for GAC Vacancies

Open Access:

Josh Churchman (nominated by Larry Collins, Vice President, Crab Boat Owners Assoc., Inc.)
Tom Ghio (nominated by Mike McCorkle, Southern California Trawlers Assoc.)

Pacific Whiting:

Richard Carroll (nominated by Greg Shaughnessy, Gen. Mgr., Ocean Gold Seafood, Inc.)
A. Pierre Marchand, Jr. (nominated by self, President, Jessie's Ilwaco Fish Company, Inc.)
Daniel A. Waldeck (nominated by self, Executive Director, Pacific Whiting Conservation Cooperative)

Mr. Burr Heneman has also submitted his resignation for the nonvoting conservation seat on the GAC. The Council Chair should appoint an interim replacement and staff will solicit nominations to appoint a permanent member at the March Council meeting.

2007-2009 Advisory Body Term

The Council must select advisory body members for the 2007-2009 Advisory Body Term for the:

- ◆ Coastal Pelagic Species Advisory Subpanel (CPSAS)--all 10 members
- ◆ Groundfish Advisory Subpanel (GAP)--all 20 members
- ◆ Highly Migratory Species Advisory Subpanel (HMSAS)--all 13 members
- ◆ Salmon Advisory Subpanel (SAS)--all 15 members
- ◆ Habitat Committee (HC)--6 non-agency members
- ◆ Scientific and Statistical Committee (SSC)—6 at-large members

A complete listing of all nominees for the positions is provided in Attachment 1.

Council Action:

- 1. Appoint Council Chair and Vice Chair for 2007.**
- 2. Consider any needed changes to COPs.**

3. **Appoint a replacement for the Tribal Government position on the Salmon Technical Team.**
4. **Appoint replacements to the Open Access and Pacific Whiting positions on the Groundfish Allocation Committee (GAC).**
5. **Direct the Council Chair to appoint an interim replacement for the Conservation position on the GAC and direct the Council staff to solicit nominees to fill the position on a permanent basis.**
6. **Appoint New Advisory Body Members to the 2007-2009 Advisory Body Term and direct any necessary action to solicit additional nominees.**

Reference Material:

1. Agenda Item B.5.a, Attachment 1: Complete Listing of Nominations for the 2007-2009 Advisory Body Term.

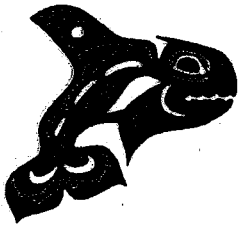
Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies
- c. Public Comment
- d. **Council Action:** Appoint Council Officers, Consider Changes to COPs, Appoint New Advisory Body Members as Necessary, Including 2007-2009 Advisory Body Term

John Coon

PFMC

10/31/06



Northwest Indian Fisheries Commission

6730 Martin Way E., Olympia, Washington 98516-5540
Phone (360) 438-1180

www.nwifc.org

FAX # 753-8659

November 6, 2006

Dr. John Coon, Deputy Director
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

Dear Dr. Coon,

The Northwest Indian Fisheries Commission (NWIFC) is pleased to nominate Keith Lutz to fill the current vacancy for the Tribal Government position on the Pacific Fishery Management Council's (PFMC) Salmon Technical Team (STT). Keith's resume is attached and provides a description of his qualifications to fill this position.

Keith has been employed by the NWIFC for over 20 years in a fisheries management capacity, and is currently the Manager of our Fisheries Management Section. Keith has extensive experience with Washington coastal and Puget Sound salmon fisheries and is familiar with coast-wide salmon fisheries. He has been responsible for compiling numerous fisheries management documents and agreements over the years and has effectively worked in a variety of technical forums. Most recently, Keith has been responsible for compiling the agreed upon fisheries document for the Washington Coast and Puget Sound. This agreement is the result of the North of Falcon process which occurs concurrent with, and closely coordinated with, the PFMC's salmon management process. I believe Keith would be a valuable contributor to the STT in fulfilling its salmon management and planning duties.

Given Keith's extensive experience working with tribes I also feel he is especially well qualified to work not only with our member tribes, but with all of the tribal interests involved in the PFMC's salmon management process. He will be an effective communicator to the tribes on salmon management issues at both the technical and policy levels.

Thank you for your consideration of this nomination for the STT, and I encourage the Council to appoint Keith to the currently vacant tribal position.

Sincerely,

Billy Frank Jr.
Billy Frank Jr., Chairman
Northwest Indian Fisheries Commission

Cc: Commissioners
Tribal Fisheries Managers

COMPLETE LISTING
OF
NOMINATIONS
FOR THE
2007-2009 ADVISORY BODY TERM

ADVISORY BODY NOMINATIONS FOR 2007-2009 TERM

(An asterisk (*) before the name indicates an incumbent)

Position & Nominee	Nominated/Supported by
--------------------	------------------------

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL (10 POSITIONS)

California Commercial (3 Positions)

- | | |
|--|--|
| * Mr. Neil Guglielmo
Camarillo, CA | Mr. John Royal; Ms. Terry Hoinsky, Fishermen's Union of America; Ms. Diane Pleschner-Steele, California Wetfish Producers Assoc. |
| * Ms. Terry Hoinsky
Wilmington, CA | Self, Fishermen's Union of America; Mr. John Royal; Ms. Diane Pleschner-Steele, California Wetfish Producers Assoc. |
| * Mr. John Royal
San Pedro, CA | Self; Ms. Terry Hoinsky, Fishermen's Union of America; Ms. Diane Pleschner-Steele, California Wetfish Producers Assoc. |

Oregon Commercial (1 Position)

- | | |
|---------------------------------------|---|
| * Mr. Eugene Law
Toledo, OR | Self; Mr. John Royal; Ms. Terry Hoinsky, Fishermen's Union of America |
|---------------------------------------|---|

Washington Commercial (1 Position)

- | | |
|--|---|
| Mr. Ryan D. Kapp
Bellingham, WA | Self |
| * Mr. Robert Zuanich
Seattle, WA | Self; Mr. Robert Plenkovich, Purse Seine Vessel Owners Assoc.; Mr. John Royal; Ms. Terry Hoinsky, Fishermen's Union of America; |

California Processor (1 Position)

- | | |
|--|---|
| * Ms. Diane Pleschner-Steele
Buelton, CA | Self, California Wetfish Producers; Mr. John Royal; Ms. Terry Hoinsky, Fishermen's Union of America |
|--|---|

Oregon Processor (1 Position)

- | | |
|--|--|
| * Mr. Mike Okoniewski
Woodland, WA | Self; Mr. John Royal; Ms. Terry Hoinsky, Fishermen's Union of America; Heather Mann, West Coast Seafood Processors |
|--|--|

Washington Processor (1 Position)

- | | |
|---|---|
| * Mr. A. Pierre Marchand
Ilwaco, WA | Self; Mr. John Royal; Ms. Terry Hoinsky, Fishermen's Union of America |
|---|---|

California Sport/Charter (1 Position)

- | | |
|---|--|
| * CPT Paul Strasser
San Pedro, CA | Mr. John Royal; Ms. Terry Hoinsky, Fishermen's Union of America; Ms. Diane Pleschner-Steele, California Wetfish Producers Assoc. |
|---|--|

Conservation (1 Position)

- | | |
|--|--|
| * Mr. Ben Enticknap
Portland, OR | Natural Resources Defense Council, The Ocean Conservancy, Pacific Marine Conservation Council, & Oceana; Mr. John Royal; Ms. Terry Hoinsky, Fishermen's Union of America |
|--|--|

ADVISORY BODY NOMINATIONS FOR 2007-2009 TERM

(An asterisk (*) before the name indicates an incumbent)

Position & Nominee

Nominated/Supported by

GROUND FISH ADVISORY SUBPANEL (20 Positions)

Fixed Gear (3 At-large)

Mr. Robert Alverson Fishing Vessel Owners' Assoc.; Jim Lone; Tim Henkel, Deep Sea
Seattle, WA Fishermen's Union of the Pacific; Westport Charterboat Assoc.

Mr. Brad A. Balderson Self
Neah Bay, WA

* **Mr. Tom Ghio** Gerry Richter, B&G Seafoods
Santa Cruz, CA

* **Mr. Gerry Richter** Phil Schenk, Point Conception Groundfishermen's Assoc.; John Mills,
Santa Barbara, CA Captain Kidd's Fish Market

Ms. Mary Williamson Self
Eureka, CA

California Trawl (1 Position)

* **Mr. Tommy Ancona** Self; Pete Leipzig, Fisherman's Marketing Assoc.
Fort Bragg, CA

Oregon Trawl (1 Position)

* **Mr. Kelly Smotherman** Self; Pete Leipzig, Fisherman's Marketing Assoc.
Hammond, OR

Washington Trawl (1 Position)

* **Mr. Marion Larkin** Self; Pete Leipzig, Fisherman's Marketing Assoc.; Westport Charterboat
Mount Vernon, WA Assoc.

Open Access South of Cape Mendocino (1 Position)

Mr. Daniel Platt Salmon Trollers Marketing Assoc.
Fort Bragg, CA

Open Access North of Cape Mendocino (1 Position)

* **Mr. Kenyon Hensel** Gerry Richter, B&G Seafoods; Leesa Cobb, Port Oford Ocean Resource
Crescent City, CA Team

Processors (2 At-large Positions)

Mr. Michael Brown West Coast Seafood Processors Assoc.
Warrenton, OR

Mr. Richard Carroll Self, Ocean Gold Seafoods, Inc.; Westport Charterboat Assoc.
Westport, WA

* **Mr. Barry Cohen** West Coast Seafood Processors Assoc.
Aptos, CA

* **Ms. Heather Mann** West Coast Seafood Processors Assoc.; Terry Hoinsky, Fishermen's
Siletz, OR Union of America

ADVISORY BODY NOMINATIONS FOR 2007-2009 TERM

(An asterisk (*) before the name indicates an incumbent)

Position & Nominee

Nominated/Supported by

GROUND FISH ADVISORY SUBPANEL (20 Positions) continued

At-Sea Processor (1 Position)

Mr. Daniel A. Waldeck Self, Executive Director, Pacific Whiting Conservation Cooperative
Portland, OR

California Charter South of Point Conception (1 Position)

Mr. Mike Hansen Self, Dana Wharf Sportfishing; Robert Fletcher, Sport Fishing Assoc. of CA
Dana Point, CA

* **Mr. Daniel Strunk** Frank Liversedge, Landing Mgr., 22nd Street Landing, San Pedro, CA
Redondo Beach, CA

California Charter North of Point Conception (1 Position)

* **Mr. Robert Ingles** Self
Hayward, CA

Oregon Charter (1 Position)

* **Mr. Wayne Butler** Self
Bandon, OR

Washington Charter (1 Position)

* **Mr. Rhett Weber** Steve Westrick, Westport Charterboat Assoc.; Butch Smith, Ilwaco Charter
Westport, WA Assoc.

Sport Fisheries (3 At-large Positions)

* **Mr. John Holloway** Self; Anthony Meeker and Dennis Richey, Oregon Anglers; James
Portland, OR Donofrio, Recreational Fishing Alliance; Ed Keene, Dale Powers, Janice
Green, Oregon Coalition for Educating Anglers

* **Mr. James Martin** James Donofrio, Recreational Fishing Alliance
Santa Barbara, CA

Mr. David Seiler Steve Westrick, Westport Charterboat Assoc.
Olympia, WA

* **Mr. Gordon Zumack** Gary G. Terrell, North Olympic Peninsula Chapter of Puget Sound Anglers;
Sequim, WA Claudia Eklund; LeeRoy Wisner, South Sound Chapter of PSA; David A.
Croonquist, N. Olympic Peninsula Chapter, PSA

Conservation (1 Position)

* **Mr. Steve Barrager** Natural Resources Defense Council, The Ocean Conservancy, Pacific
San Francisco, CA Marine Conservation Council, Oceana; Environmental Defense; The
Nature Conservancy; The Ocean Conservancy

Active Tribal Fisher (1 Position)

* **Mr. Gordon M. Smith** Self; Tom Ghio; Gerry Richter
Neah Bay, WA

ADVISORY BODY NOMINATIONS FOR 2007-2009 TERM

(An asterisk (*) before the name indicates an incumbent)

Position & Nominee

Nominated/Supported by

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL (13 POSITIONS)

Commercial Troll (1 Position)

- * **Mr. Wayne Heikkila** Self, Executive Director, Western Fishboat Owners, Assoc.
Redding, CA

Commercial Purse Seine (1 Position)

- * **Mr. August Felando** Terry Hoinsky, Fishermen's Union of America
San Diego, CA

Commercial Gillnet (1 Position)

- * **Mr. Steve Fosmark** Chuck Janisse, Federation of Independent Seafood Harvesters
Pebble Beach, CA

Commercial Fisheries (3 At-large Positions)

- * **Mr. Pete Dupuy** Self; Chuck Janisse, Federation of Independent Seafood Harvesters
Tarzana, CA
- * **Mr. Douglas Fricke** Self; Washington Trollers Assoc.; Steve Westrick, Westport Charterboat
Hoquiam, WA Assoc.
- * **Mr. William Sutton** Self
Ojai, CA

Processor South of Cape Mendocino (1 Position)

None

Processor North of Cape Mendocino (1 Position)

Ms. Gayle Parker West Coast Seafood Processors Assoc.

California Charter Boat (1 Position)

- * **Mr. Robert Fletcher** Self, President, Sportfishing Assoc. of California
San Diego, CA

Washington/Oregon Charter Boat (1 Position)

Ms. Linda Buell Captain Al, Holiday Charters, Nehalem, OR
Cloverdale, OR

Mr. David McGowen Washington Trollers Assoc.; Steve Westrick, Westport Charterboat
Westport, WA Assoc.; Butch Smith, Ilwaco Charter Assoc.

ADVISORY BODY NOMINATIONS FOR 2007-2009 TERM

(An asterisk (*) before the name indicates an incumbent)

Position & Nominee	Nominated/Supported by
--------------------	------------------------

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL (13 POSITIONS) continued

Private Sport (1 Position)

Mr. Steve Crooke Irvine, CA	Self
---------------------------------------	------

* Mr. Bob Osborne Surfside, CA	Tom Raftican, President, United Anglers of S. California
--	--

Conservation (1 Position)

Ms. Meghan Jeans San Francisco, CA	Natural Resources Defense Council, The Ocean Conservancy, Pacific Marine Conservation Council, Oceana
--	---

Ms. Shana Miller Babylon, NY	Self, Tag-A-Giant Foundation
--	------------------------------

Public At-large (1 Position)

Mr. Steve Crooke Irvine, CA	Self
---------------------------------------	------

Ms. Shana Miller Babylon, NY	Self, Tag-A-Giant Foundation
--	------------------------------

Ms. Pamela Tom Davis, CA	Self, Seafood Extension Program Coordinator, UCD
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ADVISORY BODY NOMINATIONS FOR 2007-2009 TERM

(An asterisk (*) before the name indicates an incumbent)

Position & Nominee	Nominated/Supported by
--------------------	------------------------

SALMON ADVISORY SUBPANEL (15 POSITIONS)

California Troller (1 Position)

- | | |
|---|--------------------------|
| * Mr. Duncan MacLean
El Granada, CA | Oregon Salmon Commission |
|---|--------------------------|

Oregon Troller (1 Position)

- | | |
|--|--------------------------------|
| Mr. Paul Heikkila
Coquille, OR | Self; Oregon Salmon Commission |
|--|--------------------------------|

Washington Troller (1 Position)

- | | |
|--------------------------------------|--|
| * Mr. Jim Olson
Auburn, WA | Washington Trollers Assoc.; Ilwaco Charter Assoc.; Westport Charterboat Assoc. |
|--------------------------------------|--|

Commercial Gillnet Fishery (1 Position)

- | | |
|---|---|
| * Mr. Kent Martin
Skamokawa, WA | Salmon For All; Westport Charterboat Assoc. |
|---|---|

Processor (1 Position)

- | | |
|---|--|
| * Mr. Gerald Reinholdt
St. Helens, OR | Oregon Salmon Commission; Onno Husing, Director, Oregon Coastal Zone Management Assoc. |
|---|--|

California Charter Boat (1 Position)

- | | |
|--|---------------|
| * Mr. Craig Stone
Emeryville, CA | Robert Ingles |
|--|---------------|

Oregon Charter Boat (1 Position)

- | | |
|--|------|
| * Mr. Mike Sorenson
Toledo, OR | Self |
|--|------|

Washington Charter Boat (1 Position)

- | | |
|--|---|
| * Mr. Butch Smith
Ilwaco, WA | Steve Westrick, Westport Charterboat Assoc.; Steve Watrous, Columbia Pacific Anglers Assoc. |
|--|---|

California Sport Fisher (1 Position)

- | | |
|---|---|
| * Mr. Bob Strickland
San Jose, CA | Self, President, United Anglers of California |
|---|---|

- | | |
|---|--|
| Mr. Dan Wolford
Los Gatos, CA | Self; Bob Franko, Chairman, Coastside Fishing Club |
|---|--|

Oregon Sport Fisher (1 Position)

- | | |
|--|---|
| Mr. Richard Heap
Brookings, OR | Self; Jim Welter; Scott Stewart, Oregon South Coast Fishermen; Art Kurz, Volunteers Raising Salmon--Curry Anadromous Fishermen; Pat Sherman, Mayor, City of Brookings; Curry County Board of Commissioners; Klamath Management Zone Fisheries Coalition |
|--|---|

ADVISORY BODY NOMINATIONS FOR 2007-2009 TERM

(An asterisk (*) before the name indicates an incumbent)

Position & Nominee	Nominated/Supported by
--------------------	------------------------

SALMON ADVISORY SUBPANEL (15 POSITIONS) continued

Washington Sport Fisher (1 Position)

- | | |
|---|--|
| * Mr. Steve Watrous
Vancouver, WA | Larry Snyder, Vancouver Wildlife; Butch Smith, Ilwaco Charter Assoc.;
Steve Westrick, Westport Charterboat Assoc. |
|---|--|

Idaho Sport Fisher(1 Position)

- | | |
|--|--------------------|
| * Mr. Tom Welsh
Sunsites, AZ | Self; Dave Ortmann |
|--|--------------------|

Washington Active Tribal Fisher (1 Position)

- | | |
|---|--|
| * Mr. Calvin Frank
Raymond, WA | Edward Johnstone, Quinault Indian Nation |
| Mr. Michael Lawrence
Neah Bay, WA | Gordon Smith |

California Tribal (1 Position)

- | | |
|---|---|
| Mr. Dave Hillemeier
Klamath, CA | Howard McConnell, Chairman, Yurok Tribe |
| * Mr. Mike Orcutt
Hoopa, CA | Clifford Lyle Marshall, Chairman, Hoopa Valley Tribal Council |

Conservation (1 Position)

- | | |
|---|---|
| Mr. Jim Hie
Napa, CA | Caroline Gibson, Pacific Marine Conservation Council; Karl Menard,
Bodega Bay Marine Lab |
| * Mr. Jim Tuggle
Tumwater, WA | Steve Westrick, Westport Charterboat Assoc. |

ADVISORY BODY NOMINATIONS FOR 2007-2009 TERM

(An asterisk (*) before the name indicates an incumbent)

Position & Nominee	Nominated/Supported by
--------------------	------------------------

HABITAT COMMITTEE (6 NON-AGENCY POSITIONS)

Commercial Fishing Industry (1 Position)

- | | |
|--|---|
| * Mr. Joel Kawahara
Quilcene, WA | Washington Trollers Assoc.; Paul Heikkila; Liz Hamilton, NSIA |
|--|---|

Sport Fishing Industry (1 Position)

- | | |
|--|---|
| * Ms. Liz Hamilton
Oregon City, OR | Frances Heap, Business Mgr., Northwest Sportfishing Industry Assoc. |
|--|---|

Conservation (1 Position)

- | | |
|---|---|
| * Mr. Mike Osmond
Palo Alto, CA | Natural Resources Defense Council, The Ocean Conservancy, Pacific Marine Conservation Council, Oceana |
|---|---|

Northwest or Columbia River Tribal Representative (1 Position)

- | | |
|---|---|
| * Mr. Stuart Ellis
Portland, OR | Self, Columbia River Inter-tribal Fish Commission |
|---|---|

California Tribal (1 Position)

- | | |
|---|---|
| * Mr. Dave Hillemeier
Klamath, CA | Howard McConnell, Chairman, Yurok Tribe |
| Mr. Mike Orcutt
Hoopa, CA | Clifford Lyle Marshall, Chairman, Hoopa Valley Tribal Council |

Public At-large (1 Position)

- | | |
|---|---|
| Ms. Ann Maurice
Occidental, CA | Fort Bragg Salmon Trollers Marketing Assoc. |
| * Mr. Sean White
Santa Rosa, CA | Self |

ADVISORY BODY NOMINATIONS FOR 2007-2009 TERM

(An asterisk (*) before the name indicates an incumbent)

Position & Nominee	Nominated/Supported by
--------------------	------------------------

SCIENTIFIC AND STATISTICAL COMMITTEE (6 AT-LARGE POSITIONS)

Scientists (6 At-large Positions)

* Mr. Steve Berkeley Santa Cruz, CA	Self
Dr. Thomas Helzer NMFS, Seattle, WA	Dr. Usha Varanasi, Science Research Dir., NMFS NWFSC
Dr. Stuart Todd Lee NMFS, Seattle, WA	Dr. Usha Varanasi, Science Research Dir., NMFS NWFSC
Dr. Lyman McDonald Cheyenne, WY	Self
* Dr. Andre E. Punt Seattle, WA	Self
* Dr. Hans Radtke Yachats, OR	Dr. Gil Silvia, Superintendent, Coastal Oregon Marine Experiment Station, OSU
* Dr. Steve Ralston NMFS, Santa Cruz, CA	Dr. William Fox, Director NMFS SWFSC
Dr. Vidar Wespestad Lynnwood, WA	Mr. Brad Pettinger, Administrator, Oregon Trawl Commission

COUNCIL THREE-MEETING OUTLOOK, DRAFT MARCH 2007 COUNCIL MEETING AGENDA, AND WORKLOAD PRIORITIES

This agenda item requests guidance on the following three matters:

1. The Council three-meeting outlook (March, April, and June 2007).
2. The draft agenda for the March 2007 Council meeting in Sacramento, California.
3. Council staff workload priorities for November 20, 2006 through April 8, 2007.
(The workload priorities include the period through the April 2007 Council meeting due to the short period of time between the March and April meetings.)

The Council will preliminarily review items 1 and 2 above under Agenda Item B.1 on Tuesday, November 14, 2006. With that input and information gathered from other Council actions during the week, the Executive Director will review supplemental proposed drafts of the three items listed above and discuss any other matters relevant to the Council meeting agendas and workload. After considering any reports and comments from advisory bodies and public, the Council will provide appropriate guidance for final agenda development and also has the opportunity to identify priorities for advisory body consideration for the March 2007 Council meeting.

Council Tasks:

- 1. Provide guidance on potential agenda topics for the next three Council meetings.**
- 2. Provide guidance on the draft agenda for the March 2007 Council meeting.**
- 3. Provide guidance on priorities for Council workload management between the November and April Council meetings.**
- 4. Identify priorities for advisory body consideration at the next Council meeting.**

Reference Materials:

1. Agenda Item B.6.a, Supplemental Attachment 1: Preliminary Three-Meeting Outlook for the Pacific Council.
2. Agenda Item B.6.a, Supplemental Attachment 2: Preliminary Proposed Council Meeting Agenda, March 4-9, 2007, Sacramento, California.
3. Agenda Item B.6.a, Supplemental Attachment 3: Council Workload Priorities November 20, 2006 through April 8, 2007.

Agenda Order:

- a. Agenda Item Overview
- b. Reports and Comments of Advisory Bodies
- c. Public Comment
- d. Council Guidance on Three Meeting Outlook, November Council Agenda, Council Staff Workload, and Priorities for Advisory Body Consideration

Don McIsaac

PFCMC

10/25/06

Preliminary Three Meeting Outlook for the Pacific Council

(Contingent Items are Shaded and Counted in Time Estimate; Changes from B.1.a, Att. 1 are in Dashed Boxes)

March Sacramento, CA 3/4-3/9/2007 Estimated Percent of Standard Floor Time = 120%	April Seattle, WA 4/1-4/6/2007 Estimated Percent of Standard Floor Time = 115%	June Foster City, CA 6/10-6/17/07 Estimated Percent of Standard Floor Time = 101%
<u>Administrative</u> Closed Session; Open Session Call to Order; Min. Legislative Committee Report Fiscal Matters Interim Appointments to Advisory Bodies 3 Mtg Outlook, Draft April Agenda, Workload Public Comment on Non-Agenda Items RecFin Operations	<u>Administrative</u> Closed Session; Open Session Call to Order; Min. Legislative Committee Report Interim Appointments to Advisory Bodies 3 Mtg Outlook, Draft June Agenda, Workload Public Comment on Non-Agenda Items Res. & Data Needs: Set Process for Next Cycle Ecosystem Based Mgmt Umbrella FMP: Preliminary Planning & Consideration of FMP Structure	<u>Administrative</u> Closed Session; Open Session Call to Order; Min. Legislative Committee Report Fiscal Matters Interim Appointments to Advisory Bodies Regulatory Streamlining ROA: Review Draft Agreement 3 Mtg Outlook, Draft September Agenda, Workload Public Comment on Non-Agenda Items
<u>Coastal Pelagic Species</u> NMFS Rpt Pacific Mackerel: Consider Need for Mop-up Fishery STAR Panel Terms of Ref.: Adopt final	<u>Coastal Pelagic Species</u>	<u>Coastal Pelagic Species</u> NMFS Rpt Pacific Mackerel Harvest Guideline for 2007-2008
<u>Enforcement Issues</u> USCG Annual Fishery Enforcement Report	<u>Enforcement Issues</u> State Activity Rpt--CDFG	<u>Enforcement Issues</u>
<u>Groundfish</u> NMFS Report 2007 Inseason Management (1 Session) Pac. Whiting: Adopt Final 2007 Spx & Mgmt Measures Amend. 10 (Shore-based Whiting Monitoring): Final Action	<u>Groundfish</u> NMFS Report 2007 Inseason Management (2 Sessions) Open Access Limitation: Next Steps Intersector Allocation EIS: Refinement of Preliminary Alts. FMP A-15 (AFA): Mgmt Alts for Analysis & Public Review	<u>Groundfish</u> NMFS Report 2007 Inseason Mgmt (2 Sessions) Open Access Limitation: Next Steps Trawl IQ: Further Refinement of Alts. (if Necessary) Intersector Allocation EIS: Adopt Alts. for Prelim. Analysis FMP A-15 (AFA): Final Council Action
B ₀ Workshop Report Trawl IQ: Refinement of Alternatives Nature Conservancy Prop. to Add EFH & Gear Switching		
<u>Habitat Issues</u> Habitat Committee Report	<u>Habitat Issues</u> Habitat Committee Report	<u>Habitat Issues</u> Habitat Committee Report

Agenda Item B.6.a
 Supplemental Attachment 1
 November 2006

Preliminary Three Meeting Outlook for the Pacific Council

(Contingent Items are Shaded and Counted in Time Estimate; Changes from B.1.a, Att. 1 are in Dashed Boxes)

March Sacramento, CA 3/4-3/9/2007 Estimated Percent of Standard Floor Time = 120%	April Seattle, WA 4/1-4/6/2007 Estimated Percent of Standard Floor Time = 115%	June Foster City, CA 6/10-6/17/07 Estimated Percent of Standard Floor Time = 101%
<u>Highly Migratory Species</u>	<u>Highly Migratory Species</u> NMFS Rpt Longline EFP: Adopt Final Preferred Alt. Albacore Effort Update Ref. Points for OF Determinations: Preliminary Alts.	<u>Highly Migratory Species</u> NMFS Rpt EFPs for 2008: Adopt for Pub Rev Ref. Points for OF Determinations: Adopt Alts for Pub Rev Routine Mgmt Measures: Update and Draft SAFE Rpt
<u>Marine Protected Areas</u>	<u>Marine Protected Areas</u> CINMS Research Reserves & State Regs.	<u>Marine Protected Areas</u>
<u>Pacific Halibut</u> Rpt on IPHC Annual Mtg Incidental Catch Regs for 2007: Adopt Options for Public Rev	<u>Pacific Halibut</u> Incidental Catch Regs for 2007: Adopt Final	<u>Pacific Halibut</u>
<u>Salmon</u> 2007 Mgmt Options: Adopt Range for Public Rev & Appt. Hearings Officers Inseason Mgmt: Review and Consider Recommending any Necessary Inseason Mgmt Changes Identify Stocks not Meeting Conserv. Objectives Mass Marking & CWT Information Briefing	<u>Salmon</u> 2007 Management Options: Final Adoption 2007 Methodology Review: Establish Process & Preliminary Priorities	<u>Salmon</u>
<u>Information Reports</u>	<u>Information Reports</u>	<u>Information Reports</u> Salmon Fishery Update
<u>Special Sessions</u> SSC/HC Ecosystem Based Mgmt. Planning--3/7 8 am	<u>Special Sessions</u>	<u>Special Sessions</u>

COUNCIL WORK LOAD PRIORITIES NOVEMBER 20, 2006 THROUGH APRIL 8, 2007
(Bolded tasks represent a Core Program Responsibility)

	Salmon	Groundfish	CPS	HMS	Other
ACTIVE	Safe Documents: Annual Review Preseason Rpts Annual Specs Public Hearings on Options Cons. Alert Rpt FMP Amend.15 (<i>de minimis</i> Fisheries) Complete Final EA for Implementation	Inseason Mgmt Final Adoption of Whiting Specs Trawl IQ Program: Refine Alts & Impact Anal. Intersector Alloc.-- Develop Alts. Bycatch Workplan Final Revision Shore-based Whiting Monitoring Prgrm Final Approval of Amend. 10 B ₀ Workshop Amend. 1 (AFA)--Alts. For Analysis & Public Review Open Access Limitations--Next Steps	Sardine Ann. Specs. Transmittal CPS STAR Panel TOR Final for 2007	Longline EFP: Adopt Final Preferred Alt. & EA Trans. Bigeye OF Amendment Yellowfin OF Amendment Albacore Effort Biological Reference Points	Admin Necessities (Briefing Book, minutes, Newsletter, Website, E-Filing, COP, Fiscal Matters) Pacific Halibut Mgmt Implement CS Plan Changes & Incidental Catch Regs MSA Reauthorization New Term for Advisory Bodies Research & Data Needs Trans. Habitat Com. Rpt on KRFC Habitat CINMS Regs via MSA & State Auth.
	STT Mtgs--Jan & Feb STT Mtgs--Mar & Apr SAS Mtgs--Mar & Apr	GF Allocation Com Mtg--Dec 12-13 Whiting STAR Panel--Feb. TIQC Mtg--Feb GMT Mtg--Dec, Feb; Mar & Apr at CM GAP Mtg--at Mar & Apr Council Mtgs SWAG Mtg (Whiting)--Dec/Jan	CPSMT Mtg--Feb CPSAS Mtg--Feb	HMSMT Mtg--Feb. HMSAS Mtg--Feb Planning for Joint WPFMC-PFMC Mtg	Leg. Com Mtg--Mar HC Mtg--Mar & Apr SSC Mtg--Mar & Apr EC Mtg--Mar & Apr BC Mtg--Mar (tentative) Ecosystem-Based Mgmt.--HC & SSC
	<hr/>				
	CONTINGENT Mass Marking & CWT Update Mitchell Act EIS EFH Update (5 year review) Update Historic DataSets	Gear Switching		International HMS Forum Participation Amend. : Mgmt Regime for HS Longline Fishery	PacFIN/RecFIN/EFIN issues Communication Plan
	<hr/>				
DELAYED	Amendments: OCN Coho Matrix SOF Coho Allocation Cons. Objectives: Puget S. Chinook & Coho LCR Coho Sacramento River Chinook	Alternative Mgmt Approaches GF Strategic Plan Formal Review SSC Bycatch Workshop II Amend. 14--Ownership Limits Spiny Dogfish Endorsement FMP Amend.	International Mgmt		Economic Data Collection Program

PRELIMINARY PROPOSED COUNCIL MEETING AGENDA, MARCH 4-9, 2007, SACRAMENTO, CA

	Sun, Mar 4	Mon, Mar 5	Tues, Mar 6	Wed, Mar 7	Thurs, Mar 8	Fri, Mar 9	Other
Day-Time Council Floor Matters	3:00 pm South of Falcon Forum Meeting	<u>CLOSED SESSION</u> 1:00 pm <u>CALL TO ORDER</u> 2:00 pm (15 min) <u>ENFORCEMENT ISSUES</u> B. 1 USCG Fishery Enforcement Rpt (1 hr) <u>SALMON</u> C.1 Mass Marking & CWT Update (1 hr) <u>OPEN PUBLIC COMMENT</u> (1 hr)	<u>ADMINISTRATIVE</u> D.1 Future Agenda Planning (15 min) <u>GROUNDFISH</u> E.1 B ₀ Workshop Rpt (1 hr) <u>PACIFIC HALIBUT</u> F.1 Rpt on IPHC (15 min) F.2 Incidental Catch Options for Salmon Troll & Sablefish (30 min) <u>SALMON</u> C.2 Stocks not Mtg Conservation Obj. w/ KRFC Report (2 hr) C.3 Review 2005 Fisheries & 2006 Abundance Est. (1 hr) C.4 Identify Prelim Mgmt Options including EFPs (3 hr)	<u>COASTAL PELAGIC SPECIES</u> H.1 NMFS Rpt (30 Min) H.2 <i>Mackerel Mop- up Fishery</i> (30 min) H.3 Final STAR TOR (30 min) <u>GROUNDFISH</u> E.2 NMFS Report (30 min) E.3 Pac Whiting Spx for 2007 (3 hr) <u>HABITAT</u> G.1 Current Issues (45 min) <u>SALMON</u> C.5 Adopt Options for Analysis (2 hr 30 min)	<u>GROUNDFISH</u> E.4 TIQ: Refine Alternatives for Intensified Analysis (6 hr) <u>SALMON</u> C.6 Mgmt Option Direction (if need) (45 min) <u>GROUNDFISH</u> E.5 Inseason Adjustments (2 hr)	<u>GROUNDFISH</u> E.6 Amend 10: Shore-Based Whiting Monitoring – Final (2 hr 30 min) <u>ADMINISTRATIVE</u> D.2 Minutes (15 min) D.3 Legislative (30 min) D.4 Fiscal (30 min) D.5 Interim Appointments (30 min) D.6 3-Meeting Outlook, Draft April Agenda (45 min) <u>SALMON</u> C.7 Adopt 2007 Mgmt Options (2 hr 30 min) C.8 Appoint Hrg Officers (15 min)	<u>ADMINISTRATIVE</u> 1. RecFIN Operations (1 hr) <u>GROUNDFISH</u> 2. Nature Conservancy Proposal to Add EFH & Gear Switching (1 hr 30 min) <u>HIGHLY MIGRATORY SPECIES</u> I.1 NMFS Report (30 min) I.2 EFPs – Final Longline (2 hr) I.3 Refine Bio Reference Pts (1 hr) I.4 Update on US North Pacific Albacore (1 hr)
		4 hr 15 min	8 hr	8 hr 15 min	8 hr 45 min	7 hr 45 min	2 hr 30 min
Eve			7:00 pm - Salmon Inseason Mgmt				Agenda Item B.6.a Supplemental Attachment 2 November 2006
Committees	4:00 pm BC	8:00 am GAP 8:00 am GMT 8:00 am SAS 8:00 am STT 8:00 am SSC 9:00 am LC 5:30 pm EC	8:00 am EC 8:00 am GAP 8:00 am GMT 8:00 am HC 8:00 am SAS 8:00 am STT 8:00 am SSC	8:00 am EC 8:00 am GAP 8:00 am GMT 8:00 am SAS 8:00 am STT 8:00 am HC/SSC Joint Ecosystem	8:00 am EC 8:00 am GAP 8:00 am GMT 8:00 am SAS 8:00 am STT	8:00 am EC 8:00 am STT 8:00 am SAS	

GROUND FISH ADVISORY SUBPANEL REPORT
ON COUNCIL THREE-MEETING OUTLOOK, DRAFT MARCH 2007 COUNCIL MEETING
AGENDA, AND WORKLOAD PRIORITIES

The Groundfish Advisory Subpanel discussed the three-meeting outlook and reviewed Agenda Item B.1.a, Attachment 1 and has the following recommendations:

1. Move the Open Access Limitation Item to the June Council meeting in Foster City. The majority of Open Access fishermen live in California and would be more likely to participate if the issue were discussed in that location.
2. Maintain Amendment 15 and Intersector Allocation at the April meeting, in order to stay on schedule with implementation of Amendment 15 prior to the 2008 whiting season as well as meet the current timelines associated with Intersector Allocation.
3. Keep the Trawl Individual Quota and Amendment 15 agenda items on the June agenda and strike the gear switching issue, which is currently being vetted under the Trawl Individual Quota process.

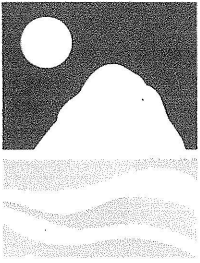
PFMC
11/15/06

GROUND FISH MANAGEMENT TEAM REPORT ON COUNCIL THREE-MEETING OUTLOOK AND WORKLOAD PRIORITIES

The Groundfish Management Team (GMT) reviewed the Council three-meeting outlook (Agenda Item B.1.a) to assess GMT workload priorities. The GMT sees its top priorities through June 2007 as involvement in the Trawl Individual Quota (TIQ) program, 2007 Pacific whiting harvest specifications, groundfish stock assessments and STAR Panel review, and the intersector allocation process. Open access limitation is also a Council priority, however the GMT suggests that NMFS and the States meet over the winter for logistical discussions before that item is added to the GMT workload.

Dr. McIsaac asked the GMT to consider whether they would have time prior to the March 2007 meeting to work with Environmental Defense (ED) and The Nature Conservancy (TNC) on their Central California Coast Sustainable Groundfish Plan (Agenda Item B.1.d). The GMT expects to be fully committed with the previously identified priorities. The GMT recommends that the ED/TNC proposal be addressed through other Council initiatives. Namely, ED/TNC could pursue their proposed closed areas through the formal essential fish habitat designation process as outlined in the Groundfish Fishery Management Plan section entitled "Habitat Conservation Framework." In addition, the GMT notes that the ED/TNC proposal is related only to central California and suggests that the Council fold these concepts into its evaluation of gear switching on a coastwide basis. The GMT has also discussed whether the topic of gear switching should be included in the TIQ analysis, the 2009-2010 biennial specifications, or considered through a separate amendment process. The GMT is in favor of the topic being considered through a separate process however plans to discuss this further with the Groundfish Allocation Committee in December 2006.

PFGMC
11/17/06



City of Morro Bay

HARBOR DEPARTMENT
1275 Embarcadero
Morro Bay, CA 93442
Ph. 805-772-6254
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AGENDA NO. B-6

Agenda Item B.6.c
Supplemental Public Comment
November 2006

November 17, 2006

BY HAND

Chairman Donald Hansen
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

Re: California Sustainable Groundfish Plan

Dear Chairman Hansen and Members of the Council:

We urge you to agendize the Central California Sustainable Groundfish Plan for the Council's March 2007 meeting. We believe that this plan will provide additional regulatory stability, flexibility, and habitat protection that is needed to re-invigorate Central California fisheries and the ports and people that depend on them. The plan will result in greater regulatory stability without reducing accountability to the Council's and NOAA's performance standards and fishery objectives by creating no-trawl zones proactively, without waiting for the Sanctuary or other entities to enact habitat protection measures. Greater flexibility would be achieved through the plan's gear-switching provision, and will be key to our survival as a fishing community.

We know there has been some discussion this week at the PFMC about the approximate one month of increased landings we have had here in Morro Bay due to black cod open access. That activity has been wonderful after nine months of almost no landings here, but you know better than most that the current black cod phenomenon will not sustain our port into the future. We need to reestablish consistent slope rockfish and other groundfish landings to hold a workforce and support infrastructure on the waterfront.

Gear switching and low impact trawl or Scottish seine would allow us to transition from trawling (high volume, low value) to using improved gear to catch fish in ways that increase value and reduce discards. A lower volume, higher value fishery is the key to preserving our business and protecting the fishing heritage of the Central California coast. Please support and adopt this hopeful vision of the future and make it a reality.

Sincerely,

Rick Algert
Harbor Director

November 14, 2006

Don Hansen
Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

Re: Proposed Central California Sustainable Groundfish Plan

Dear Chairman Hansen:

I am specifically writing this letter to urge you to agendize the Central California Sustainable Groundfish Plan for the Council's March meeting. I believe that this proposed plan will provide the regulatory stability, flexibility, and habitat protection that is needed to re-invigorate central California fisheries, and the ports and people that depend on them.

It is my hope that the plan will result in greater regulatory stability, without reducing accountability to the Council's and NOAA's performance standards and fishery objectives, by creating no-trawl zones *proactively*, without waiting for the Sanctuary or other entities to enact habitat protection measures.

Greater flexibility for fishermen would be achieved through the plan's gear-switching provision, and this provision will be key to our survival as a fishery. It would allow many fisherman to transition from trawling (high volume, low value) to using fixed gear methods that would increase catch value and reduce discard.

I have been working on these waters for almost 3 decades now. I believe that a lower volume, higher value fishery is the key to preserving and protecting the fishing heritage of the central California coast. I urge the Council's consideration of this matter in March.

Sincerely,

Steve Fitz
Owner/Operator
F/V Mr. Morgan