

PROPOSED AMENDMENT 4 TO THE FISHERY MANAGEMENT PLAN FOR U.S. WEST COAST
FISHERIES FOR HIGHLY MIGRATORY SPECIES: “HOUSEKEEPING” CHANGES
DRAFT FOR COUNCIL REVIEW

This attachment shows proposed changes to the FMP in marked up from beginning on page 5. To make it easier to understand these changes, a clean copy of the text in its proposed final form starts on page 79.

Summary of Proposed FMP Changes

Amendments to the text in Chapter 1, Introduction; Chapter 4, Preventing Overfishing and Achieving Optimum Yield; and Chapter 6, Management Measures are proposed. In addition, Chapter 8, Research and Data Needs for Management, would be deleted from the FMP with current research and data need assessments included periodically in the Stock Assessment and Fishery Evaluation (SAFE) document produced annually. Updates to the research and data needs assessment would be timed to coincide with the Council’s Research and Data Needs document produced by its Scientific and Statistical Committee.

The proposed changes are not intended to change the policy framework described in the FMP but rather to remove or update descriptions that have become out of date, reflect current fishery management practice as described in National Standard 1 Guidelines,¹ and reorganize and revise the text for concision and clarity. As much as possible, descriptive information is revised to make it less likely to become dated in the future. As appropriate, cross references to the Code of Federal Regulations have been removed recognizing that when regulations are changed these cross references can become erroneous.

Microsoft Word “track changes” has been used to show how the document was edited with the following notation:

- ~~Deleted text~~
- Inserted text
- ~~Moved text (original location)~~
- Moved text (new location)

In Chapters 1 and 6, for simplicity moved text is not marked by double underline/green but the original section number is shown struck-out and the new section number underlined.

Changes to Chapter 1

- Original Sections 1.6.1, 1.6.2, 1.6.3 1.6.4, and 1.6.9 describing, respectively, the Inter-American Tropical Tuna Commission, the Western and Central Pacific Fisheries Commission, United Nations Agreements, and Other International Entities, have been collapsed under a single heading, Subsection 1.6.1, International Entities and Agreements.

Changes to Chapter 4

- Section 4.1, describing reference points, has been subdivided into two subsections describing reference points required for all stocks and for stocks not subject to MSA Section 304(i) (the “international exception”). This better reflects the fact that certain reference points do not need to be established for stocks managed pursuant to an international agreement.

¹ Most recently updated October 18, 2016.

- Discussion of maximum sustainable yield (MSY) and optimum yield (OY) have been elevated to second level sections (4.2 and 4.3 respectively). Discussion of the difficulty in specifying OY for internationally managed stocks is discussed and guidance from revised National Standard 1 Guidelines on this matter is incorporated.
- Descriptions of the MSY and OY control rules have been deleted since these concepts are not used in HMS management and are not described under current National Standard 1 Guidelines. (For domestically managed stocks, identification of allowable biological catch, ABC, the ABC control rule, and the annual catch limit, ACL, instead are used to determine necessary controls on catch.)
- The “default OY control rule,” (OY = MSY) is replaced with direction for the Council to consider a 25% reduction from MSY as a starting point for identifying OY. Setting OY equal to MSY is inconsistent with the definition of OY in the MSA, which states that OY is prescribed on the basis of MSY as reduced by any relevant, social, or ecological factor. The 25% reduction as a floor from which to consider a reduction from MSY to specify OY incorporates the concept of specifying an “alternative OY control rule for vulnerable species” described in current Section 4.1.2.2.
- Discussion of status determination criteria and the Council response to overfishing have been moved under renumbered section 4.4, Assessment of Stock Status. A sentence has been added in the introductory paragraph for this section stating “the Council should recommend adopted SDCs [status determination criteria] as limit reference points to be considered by the appropriate RFMO [regional fishery management organization].” This is intended to facilitate greater engagement by the Council in the formulation of U.S. positions in RFMO forums.
- In renumbered section 4.4.2.1, International Overfishing, the Council is given the option of notifying NMFS whether it should be considered the “appropriate council” for the purposes of being notified when NMFS determines that a stock is subject to overfishing (or overfished) pursuant to MSA section 304(i), invoking the obligations therein.
- Section 4.5, Management of Stocks not Subject to MSA Section 304(i), has been added. This more clearly explains identification of the allowable biological catch (ABC) level, the ABC control rule, the annual catch limit (ACL), and the annual catch target (ACT) for domestically managed stocks. Currently all stocks under the HMS FMP are subject to the “international exception” from establishing these reference points and controlling domestic catch through appropriate accountability measures (AMs).
- Renumbered Section 4.6, Stock Assessment and Fishery Evaluation Report (SAFE), has been revised to more clearly enumerate contents of the SAFE with respect to harvest specifications (MSY, OY, SDC, etc.). This section also notes that the SAFE will periodically include research and data needs recommendations, which is an alternative to the out of date information contained in Chapter 8 of the current FMP (as noted above, Chapter 8 is deleted).
- Original Section 4.5, Measures Adopted by the Council to End Overfishing and Rebuild Overfished Stocks, is removed, recognizing that requirements pursuant to the 2007 reauthorization of the MSA and revisions to National Standard 1 Guidelines exempt councils from developing domestic rebuilding plans for stocks subject to international management. This section was added to the FMP before the 2007 reauthorization. This history is noted at the end of new Section 4.4.2.1, International Overfishing.
- Table 4-1, Demographic and productivity comparison of highly migratory MUS and selected prohibited species, Table 4-2, Summary of population status of management unit species at the time of FMP adoption, and Table 4-3, Stockwide and regional catches with respect to MSY, sustainability, and regional harvest guidelines, are deleted. The information in these tables will be

periodically updated in the SAFE document. Figure 4-1, General model of maximum sustainable yield control rules is deleted, because, as noted above, discussion of these control rules has been eliminated from the FMP as no longer relevant to current management practices.

Changes to Chapter 6

- The general management measures described under original Section 6.1 have been grouped into six categories: Legal Gear and Gear Restrictions (new 6.1), Permits (6.2), Bycatch Monitoring and Minimization (6.3), Controlling Catch (6.4), and Other Measures (6.5).
- The original sections on the prohibition on the sale of striped marlin (6.2.4), permits (6.2.5), and reporting requirements (6.2.6), are moved from the section on fishery-specific management measures to the appropriate sections outlined above.
- The descriptions of fishery-specific management measures (new Section 6.6) are revised to better reflect Federal HMS regulations at 50 CFR 660 Subpart K.

Guide to Reorganization of Sections

Original Section Numbers / Headings	Revised Section Numbers / Headings
1 Introduction	1 Introduction
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1.6.2 U.S.-Canada Albacore Treaty	1.6.1 International Entities and Agreements
1.6.3 Western and Central Pacific Fisheries Commission	1.6.1 International Entities and Agreements
1.6.4 United Nations Agreements	1.6.1 International Entities and Agreements
1.6.5 High Seas Fishing Compliance Act (HSFCA)	1.6.2 High Seas Fishing Compliance Act (HSFCA)
1.6.6 Western Pacific Pelagics FMP	1.6.3 Western Pacific Pelagics FMP
1.6.7 Relationship to Existing Fishery Management	1.6.4 Relationship to Existing Fishery Management
1.6.8 Treaty Indian Fishing Rights	1.6.5 Treaty Indian Fishing Rights
1.6.9 Other International Entities	1.6.1 International Entities and Agreements
4 Preventing Overfishing and Achieving Optimum Yield	4 Preventing Overfishing and Achieving Optimum Yield
4.1 Reference Points Including MSY, OY, and Status Determination Criteria	4.1 Reference Points Including MSY, OY, and Status Determination Criteria (subsections added 4.1.1 Reference Points Required for All Stocks, 4.1.2 Reference Points Required for Stocks not Subject to the Exception under MSA Section 303(a)(15))

Original Section Numbers / Headings	Revised Section Numbers / Headings
4.1.1 MSY, SDC, and Determining Overfishing and Overfished	4.2 MSY, 4.4.1 Status Determination Criteria
4.1.2 Optimum Yield	4.3 Optimum Yield
4.1.4 ABC, ACLs, ACTs, and Accountability Measures	4.5.1 ABC, ACLs, ACTs, and Accountability Measures
4.1.5 Council Response to Overfishing	4.4.2 Council Response to Overfishing
4.2 Assessment of Stock Status	4.4 Assessment of Stock Status
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4.4 Status of Management Unit Stocks at the Time of FMP Adoption	
4.5 Measures Adopted by the Council to End of Overfishing and Rebuild Overfished Stocks	
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6 Management Measures	6 Management Measures
6.1 General Conservation and Management Measures	
6.1.1 Legal Gear and Gear Restrictions	6.1 Legal Gear and Gear Restrictions
6.1.2 Incidental Catch Allowance	6.4.3 Incidental Catch Allowance
6.1.3 Bycatch (Including Catch-and-Release Programs)	6.3 Bycatch (Including Catch-and-Release Programs)
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6.1.8 Allocation	6.4.2 Allocation
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6.1.10 Procedures for Reviewing State Regulations	6.5.2 Procedures for Reviewing State Regulations
6.1.11 Exempted Fishing Permits	6.5.3 Exempted Fishing Permits
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6.2 Specific Conservation and Management Measures	6.6 Fishery-Specific Conservation and Management Measures
6.2.1 Drift Gillnet Fishery Management Measures	6.6.1 Drift Gillnet Fishery Management Measures
6.2.2 Pelagic Longline Fishery Management Measures	6.6.2 Pelagic Longline Fishery Management Measures
6.2.3 Purse Seine Fishery Management Measures	6.6.3 Purse Seine Fishery Management Measures
6.2.4 Prohibit Sale of Certain Species (No-sale Marlin Provision)	6.4.4 Prohibition on the Sale of Striped Marlin
6.2.5 Permits	6.2.1 Permits
6.2.6 Reporting Requirements	6.2.2 Reporting Requirements
6.3 Domestic Annual Harvest (DAH), Total Allowable Level of Foreign Fishing (TALFF), and Domestic Annual Processing (DAP)	6.5.6 Domestic Annual Harvest (DAH), Total Allowable Level of Foreign Fishing (TALFF), and Domestic Annual Processing (DAP)

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1.0 Introduction

1.1 Purpose of This Document

The FMP includes important species of tunas, billfish and sharks which are harvested by West Coast HMS fisheries. A complete list of species in the management unit is provided in Chapter 3. The FMP is intended to ensure conservation and promote the achievement of optimum yield of HMS throughout their ranges, both within and beyond the U.S. Exclusive Economic Zone (EEZ), to the extent practicable. Effective conservation and management in most cases will require concerted U.S. and international action. The FMP may serve as a vehicle for fulfilling the West Coast portion of U.S. obligations under international conservation agreements, if domestic U.S. implementing legislation authorizes its use.

The FMP has been amended three times. Amendment 1, approved in 2007, addresses overfishing of bigeye tuna, a management unit species. Amendment 1 also reorganized the FMP, which in its prior form was combined with the Final Environmental Impact Statement evaluating the effects of its implementation. The reorganized FMP is a more concise document containing those elements required by the Magnuson-Stevens Fishery Conservation and Management Act describing the management program. Amendment 2, approved in 2011, made FMP provisions (principally in Chapters 3-5) consistent with the revised National Standard 1 Guidelines (50 CFR 600.310) adopted pursuant to the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. Amendment 3, adopted in 2015, added a suite of lower trophic level species to the FMP's list of ecosystem component (EC) species. Consistent with the objectives of the Council's FMPs and its Fishery Ecosystem Plan, Amendment 3 prohibits future development of directed commercial fisheries for the suite of EC species shared between all four FMPs ("Shared EC Species") until and unless the Council has had an adequate opportunity to both assess the scientific information relating to any proposed directed fishery and consider potential impacts to existing fisheries, fishing communities, and the greater marine ecosystem.

~~The FMP is intended to ensure conservation and promote the achievement of optimum yield of HMS throughout their ranges, both within and beyond the U.S. Exclusive Economic Zone (EEZ), to the extent practicable. Effective conservation and management in most cases will require concerted U.S. and international action. The FMP may serve as a vehicle for fulfilling the West Coast portion of U.S. obligations under international conservation agreements, if domestic U.S. implementing legislation authorizes its use.~~

This FMP is a "framework" plan, which includes some fixed elements and a process for implementing or changing regulations without amending the plan (flexible measures). Ongoing management of highly migratory species, and the need to address new issues that arise, make it impossible to foresee and address all regulatory issues in the initial plan. Some framework adjustments can be implemented more quickly than plan amendments, allowing for more timely management response. Changes to any of the fixed elements in the plan require a plan amendment. The framework procedures are described in Chapter 5.

This document also specifies the initial management measures, which are implemented through federal regulations affecting one or more fisheries for highly migratory species. They may be modified in the future, or new regulations may be implemented, using the framework adjustment procedures in the plan.

This FMP provides the vehicle to address issues of regional, national and international concern. The conservation community has raised concerns about the status of HMS, essential fish habitat, and bycatch of fish and capture of protected species in HMS fisheries. International and U.S. policies reflect these concerns. The 1995 Agreement on Conservation and Management of Straddling Fish Stocks and Highly

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Migratory Fish Stocks provides that nations will cooperate in regional management bodies to establish and ensure compliance with conservation measures for HMS. The 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, adopted by the Food and Agriculture Organization of the United Nations (FAO), requires nations to maintain a registry of authorized vessels fishing on the high seas and ensure that such vessels are marked for identification and that they report sufficient information on their fishing activities. The High Seas Fishing Compliance Act is the domestic legislation enacted in 1995 to implement the FAO Agreement. The FAO also was the forum for the negotiation of a non-binding “Code of Responsible Conduct of Fisheries” which establishes principles for national and international fishery management. The final text of this code was negotiated in September 1995 and the NMFS has completed an implementation plan for the U.S. In 1999, the FAO adopted an International Plan of Action for the Conservation and Management of Sharks, which encourages nations to assess the status of shark stocks within their EEZs and those fished on the high seas. The U.S. has developed a National Plan of Action for conservation and management, and an FMP can help by focusing research and data collection efforts to support the National Plan. Within the U.S., the Magnuson-Stevens Act requires councils to describe and identify essential fish habitat, minimize to the extent practicable adverse effects on habitat caused by fishing, and identify other actions to encourage conservation and enhancement of habitat. The Act requires that conservation and management measures, to the extent practicable, minimize bycatch and to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. Finally, the Marine Mammal Protection Act, Endangered Species Act and Migratory Bird Treaty Act provide protections for special resources. An FMP serves as a mechanism to address these critical issues in an open process and with the advice of all concerned.

This FMP provides a basis to increase ~~federal~~ investment in research, data collection and stock assessments for Pacific HMS. Knowledge of stock status is quite limited for many species. Increased funding is necessary to make sure that overfishing is prevented and that sustainable yields are provided for the long term. An FMP also can help to make sure that fishery data gaps and inconsistencies for HMS are addressed.

This FMP provides a mechanism for collaboration with the other Pacific area councils to achieve more consistent management of fisheries which harvest stocks in common. In particular, ~~this FMP could facilitate coordinating management of ere is a need to ensure that some or all restrictions on~~ Hawaii-based ~~permitted pelagic~~ longline ~~vesselsrs that make landings on the West Coast and to protect turtles and birds also apply to~~ West Coast-based ~~pelagic~~ longliners. Also, the councils and the NMFS science centers in both regions ~~should~~could work together in the preparation of stock assessment and fishery evaluation (SAFE) reports on a regular basis. The councils should receive consistent scientific advice concerning the status of stocks which vessels from the different council areas harvest in common.

1.2 How This Document is Organized

This FMP is organized in ~~10~~seven chapters and several appendices:

- Chapter 1 (this chapter) describes the rationale for HMS management and provides background information on the management context.
- Chapter 2 describes the management philosophy, recognizing the international nature of HMS management, and lists the goals and objectives of the FMP.
- Chapter 3 describes the species in the management unit, including ecosystem component (EC) and prohibited species.
- Chapter 4 describes the framework for determining management thresholds, control rules for management, ~~and~~ measures to prevent overfishing and rebuild overfished stocks, and the contents of the SAFE document.
- Chapter 5 describes the process for periodically modifying applicable harvest specifications and

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management measures. This FMP is a framework plan, meaning that most management measures may be changed through regulatory action without a need to amend the FMP.

- Chapter 6 describes general ~~and fishery specific~~ management measures in ~~place at the time of FMP adoption that may be used to manage West Coast HMS fisheries.~~ Many of these measures can be changed through the management framework described in Chapter 5 allows management measures to be adopted and adjusted to address ongoing conservation concerns. This chapter also describes required specifications for any foreign fishing in the West Coast EEZ targeting HMS. Currently, HMS within the West Coast EEZ are considered fully utilized and no foreign fishing is permitted.
- Chapter 7 describes essential fish habitat (EFH) for HMS, fishing and non-fishing effects on this EFH and mitigation measures that may be applied.
- ~~Chapter 8 lists research and data needs identified at~~ Material from the time original combined FMP and final environmental impact statement, published in August 2003 as part of FMP adoption, the FMP implementation process is available on the Council's website. ~~This list may be periodically updated in the annual stock assessment and fishery evaluation (SAFE) reports.~~

~~There are eight appendices to the FMP containing descriptive material relating to fisheries, stock status, bycatch, protected species, EFH, critical habitat, and management costs. Descriptive information may be periodically updated in SAFE reports. Furthermore, because these appendices do~~ does not describe the management framework or Council HMS management policies and procedures and only supplements the required and discretionary provisions of the FMP described in §303 of the Magnuson-Stevens Act, ~~they may be periodically updated without being subjected to the Secretarial review and approval process described in §304(a) of the Magnuson-Stevens Act. These appendices are published under separate cover.~~

1.3 Application of Federal Authority

The management unit in this FMP consists of highly migratory species and their associated fisheries which occur within the West Coast EEZ and on the high seas with the catch being landed on the West Coast. This is consistent with National Standard three of the MSFCMA, which requires that “To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.” It also is consistent with Section 102 of the Act which states that, “The United States shall cooperate directly or through appropriate international organizations with those nations involved in fisheries for highly migratory species with a view to ensuring conservation and shall promote the achievement of optimum yield of such species throughout their range, both within and beyond the exclusive economic zone.”

This FMP applies to all U.S. vessels that fish for management unit species within the EEZ off California, Oregon, or Washington. This FMP also applies to U.S. vessels that fish for management unit species on the high seas (seaward of the EEZ) and land their fish in California, Oregon or Washington. However, pelagic longline vessels that are registered for use under a Western Pacific longline limited entry permit and fish on the high seas and land their fish in California, Oregon, and Washington ~~will continue to be~~ are also subject to ~~the requirements—regulations promulgated pursuant to the WPFMC's Pelagic Fishery Ecosystem Plan for vessel monitoring system units, observer coverage, Western Pacific longline logbook forms, seabird avoidance gear, time and area closures, gear restrictions, and other measures at (50 CFR 660.665 Subpart CF) whether they make landings on the West Coast or areas under the WPFMC's jurisdiction. U.S. vessels that fish with longline gear for management unit species on the high seas and land their catch solely in western Pacific ports (Hawaii, American Samoa, Guam, Northern Mariana Islands) likewise are subject to the western Pacific regulations at 50 CFR 660 Subpart C.~~

The FMP does not apply to U.S. vessels that fish for management unit species on the high seas and land

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into a non-U.S. port. However, those vessels are subject to the requirements of the High Seas Fishing Compliance Act (HSFCA, 16 U.S.C. 5501 et seq.), including permit and reporting requirements.

U.S. vessels that fish for tuna and associated species in the eastern tropical Pacific Ocean also may be subject to management measures under the Tuna Conventions Act (16 U.S.C. 951 et seq.), which implemented the agreement that established the Inter-American Tropical Tuna Commission. There also is the potential for regulations to be promulgated in the future pursuant to other international arrangements such as the U.S.-Canada Albacore Treaty. Section 1.6 provides more information about the relationship of fishery management under this FMP with fishery management under international arrangements.

The application of federal authority as described above promotes the achievement of many of the objectives of the FMP (Section 2.2), including:

- Ensure or contribute to international cooperation in the long-term conservation and sustainable use of highly migratory fish stocks that are caught by West Coast-based fishers.
- Promote inter-regional collaboration in management of fisheries for species which occur in the Pacific Council's managed area and other Councils' areas.
- Promote effective monitoring and enforcement.
- Establish procedures to facilitate rapid implementation of future management actions, as necessary.
- Ensure that fisheries are in compliance with laws and regulations to conserve and restore species listed pursuant to the ESA, MMPA and MBTA.

This application of authority is appropriate for the following reasons:

- To ensure consistent application of conservation and management measures applying to U.S. fishers on the high seas under other FMPs (e.g., Hawaii longline restrictions);
- To implement measures adopted by international management organizations in which the U.S. participates; if authorized by domestic U.S. implementing legislation;
- To promote consistent and coordinated data collection and management throughout the range of HMS; and
- To promote cooperative and reinforcing management of U.S. HMS fisheries throughout the Pacific such that vessels cannot avoid conservation requirements simply by relocating their operations.

1.4 Complexity of HMS Management

~~The~~HMS management ~~of highly migratory species~~ presents formidable challenges, particularly in the Pacific area. There are numerous species of tuna, billfish, oceanic sharks, and ~~others~~other species which ~~range that~~ throughout vast areas of the Pacific Ocean. Knowledge of stock distribution and status is limited. There is a moderate amount of ~~information~~ for the commercially important tunas, lesser amounts for swordfish and other billfishes, and scant information for sharks and other highly migratory fishes. Regular and comprehensive stock assessments are needed for certain species. These species are harvested by numerous coastal and distant-water fishing nations throughout the Pacific. The FEIS for this FMP (PFMC 2003, Chapter 2 Section 2.6) documents 36 nations harvesting HMS in the Pacific. United States fisheries harvest HMS in the EEZ of the U.S., in the ~~zones~~EEZs of other nations and on the high seas.

~~Conservation of HMS is contingent on effective international management institutions and measures. There is no single, pan-Pacific institution that manages all HMS throughout their ranges. The Inter-American Tropical Tuna Commission (IATTC) adopts conservation measures for yellowfin and bigeye tunas in the eastern Pacific Ocean. Member nations, including the U.S., are obligated to implement these measures for~~

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~~their national fisheries. On September 5, 2000, the Convention on Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean was adopted. The international Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean entered into force on April 19, 2004. The Convention establishes a Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, now more commonly referred to as the Western and Central Pacific Fishery Commission. Initial staffing for the Commission is in progress at its site in Pohnpei, Federated States of Micronesia. A noteworthy aspect of the Convention is the fact that it will exercise management control into the high seas zones outside national EEZs in contrast to some other regional fishery management organizations.~~

The two principal regional fishery management organizations (RFMOs) responsible for conservation in the Pacific are the Inter-American Tropical Tuna Commission (IATTC) and the Western and Central Pacific Fishery Commission (WCPFC). The treaties establishing these RFMOs give them wide scope to manage and conserve HMS and other organisms caught in HMS fisheries, but principally they manage fisheries for tropical tunas (yellowfin, skipjack, and bigeye), temperate tunas (Pacific bluefin and North Pacific albacore), and certain billfish (swordfish) in their convention areas. Increasingly, RFMOs are adopting measures dealing with non-target species including sharks, billfish, and various non-fish species (sea turtles, marine mammals, seabirds). Member nations, including the U.S., are obligated to implement these measures for their national fisheries.

In 1981, the United States and Canada signed the Treaty on Pacific Coast Albacore Tuna Vessels and Port Privileges, which permits fishing vessels of each nation to fish for albacore tuna in waters of the other nation beyond 12 miles. Recently, U.S. albacore fishermen became concerned about the increased effort by Canadian vessels in U.S. waters and the lack of information on the amount of albacore taken by Canadian vessels. The U.S. and Canada have agreed to Treaty changes to resolve these issues. See section 1.6.2 for more information on this issue.

Within the U.S., HMS fishery management in the Pacific area is the responsibility of three regional fishery management councils, the Western Pacific ~~Regional~~ Fishery Management Council (~~WPRFMC~~WPFMC), North Pacific Fishery Management Council (NPFMC), and the PFMC, and the adjacent states. ~~Some form of coordination~~Coordination among councils is ~~required~~desirable, because fishers from the different council areas are harvesting the same stocks of HMS, and in some cases are fishing in the same areas, but landing in different locations. ~~This is complicated by the fact that the council regions have different fishery traditions in addition to different management objectives, measures and concerns. The WPRFMC manages HMS fisheries pursuant to the FMP for the Pelagic Fisheries of the Western Pacific Region. The NPFMC does not manage HMS, except that sharks, including some migratory species, are included in the Gulf of Alaska Groundfish FMP and Bering Sea and Aleutian Islands Groundfish FMP. Currently, the NPFMC is not contemplating development of an FMP for HMS fisheries in their management area. However, the Pacific Council intends to keep the NPFMC informed of its proposed actions. Procedures for coordination with the WPRFMC and NPFMC are described in Section 5.1. This process ensures that WPRFMC and NPFMC are informed of and provided opportunity to comment on Pacific Council management actions affecting fisheries in their respective management areas, and it promotes consistent management of HMS fisheries.~~

~~Until now, there has been no FMP for West Coast-based fisheries for HMS. The fisheries have been managed by the States of Washington, Oregon and California, although some federal laws also apply. Federal~~Prior to implementation of the FMP, West Coast-based fisheries for HMS were mainly managed by the states of Washington, Oregon and California, in concert with relevant federal laws. These federal statutes include the High Seas Fishing Compliance Act, Tuna Conventions Act, Marine Mammal Protection Act, Migratory Bird Treaty Act and Endangered Species Act. The lack of a single FMP covering all U.S. vessels in the Pacific created a situation where U.S. vessels fishing on the high seas ~~may~~could be subject to

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different regulations, depending on where they ~~start~~started their trip or where they ~~land~~landed. This created inequities and frustrated achievement of management goals. In addition, foreign vessels and U.S. vessels ~~may be~~were often subject to different regulations.

~~Within~~At the ~~U.S. West Coast-based fisheries~~time of FMP implementation, HMS ~~are~~were harvested by five major ~~West Coast-based commercial gear groups~~fisheries and various recreational fisheries. ~~The commercial gears~~Commercial fisheries include surface hook—and—line, pelagic drift gillnet, pelagic longline, purse seine and harpoon, ~~and are used~~. These fisheries operate in the West Coast EEZ, in state waters, and on the high seas. Anglers pursue HMS from commercial passenger fishing vessels as well as private boats. There are sport fisheries targeting albacore, mixed tunas and dorado, billfish, and sharks. At the time of FMP adoption, there were no quotas or allocations among gear groups, ~~however user~~. User conflicts ~~have arisen~~occurred, particularly in California, where state regulations ~~prohibit~~prohibited longlining within 200 miles and ~~control~~controlled time and area for the drift gillnet fishery.

~~Representatives of the drift gillnet fishery have proposed a limited longline fishery in the EEZ to target tunas and swordfish. Longliners currently may land HMS in California if the fish are harvested outside 200 miles. The proposers' intent is to evaluate longline gear as an alternative to drift gillnet gear to reduce bycatch or bycatch mortality, and determine if a longline fishery is an economically viable substitute for drift gillnet gear. The recreational community, particularly in southern California, is~~has been concerned about the status and availability of tunas, billfish, and sharks and the impacts of the commercial fisheries on the recreational fisheries for these species. Anglers ~~oppose~~have opposed a longline fishery in the EEZ off California targeting tunas and swordfish. They are concerned about increased fishing mortality and commercial effort in general and increased bycatch of striped marlin, sharks and other species.

In addition, a growing conservation community is concerned about the management of HMS, including sharks, which are particularly vulnerable to overexploitation. This community also is concerned about increasing bycatch and bycatch mortality of HMS and other fish, and protected species. Longline and drift gillnet gears targeting HMS also capture protected species such as marine mammals, seabirds and turtles. ~~There is substantial information on the catch and bycatch of fish and the capture of protected species in the West Coast drift gillnet fishery, which has been observed since 1990 under the auspices of the Marine Mammal Protection Act. This fishery is subject to a Take Reduction Plan, and more restrictive gear measures have been in effect since 1997 to reduce the take of marine mammals.~~

1.5 History of the Fishery Management Plan

The Pacific Council was created in 1976 pursuant to the Magnuson-Stevens Act, and began to develop FMPs for all of the major fisheries in its area of authority, including a draft FMP for billfish (including swordfish) and oceanic sharks ~~-(PFMC 1981)~~. At that time, tunas were not included in the Magnuson-Stevens Act and thus could not be managed by councils. The draft billfish FMP and several others were not adopted by the Council, because it became clear that federal management of all West Coast fisheries was not necessary nor cost-effective. With limited resources, the Council decided to concentrate its efforts on those which required federal management, such as salmon and groundfish. In the case of billfish and oceanic sharks, the Council concluded that effective stock conservation required international management efforts and that there was little the Council could accomplish. The fishery management problems were primarily in California, and the State was addressing these problems.

In 1990, the Pacific States Marine Fisheries Commission (PSMFC) adopted an interjurisdictional fishery management plan for thresher shark (PSMFC 1990) pursuant to the Interjurisdictional Fisheries Act, 16 U.S.C. 4101 et seq. The fishery for thresher shark began off California in 1977. Thresher sharks are ~~harvested in~~targeted by drift gillnets in California along with swordfish and mako sharks. Incidental catches of thresher shark also occur in set gillnet fisheries. Drift gillnet fisheries for thresher shark began off the

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coasts of Oregon and Washington in 1983 under experimental fishing permits. This permit fishery in Oregon and Washington continued through 1988, when it was terminated due to bycatch of marine mammals and leatherback turtles, declining interest in the fishery and concerns about the abundance of thresher shark. The PSMFC plan established a management panel ~~comprised~~composed of one member each from the states of Washington, Oregon, and California, which ~~makes~~made management recommendations to the state agencies. The plan proposed an annual coastwide thresher shark harvest guideline of 750,000 pounds (340 mt dw) and discouraged catches of juvenile sharks. No quotas were established but states did agree to this harvest guideline, which since 1991 has never been approached. ~~There have been no~~No additional management actions ~~since~~were adopted subsequent to the PSMFC plan was adopted.

~~In December 1994, the Western Pacific Council requested that the Secretary of Commerce designate it as the single council responsible for management of domestic pelagic fisheries in the Pacific.² This request was based on a paper developed by the Western Pacific Council which evaluated several alternatives, including status quo, coordinated data collection, a joint FMP, Secretarial management, and single council designation. The Western Pacific Council argued that one FMP was necessary to “ensure the ability to monitor and manage the fisheries throughout their range, to the extent practicable, in a consistent and efficient manner.” The initial focus of the comprehensive FMP would be to address data gaps and inconsistencies. The Council concluded that the single designation alternative was most efficient and effective. The Council already had an FMP for tunas and other large pelagic fishes, which could be amended to include fisheries in the other two council areas. The Western Pacific Council did not favor a joint FMP because of the requirement that all councils must approve all measures and the need for joint meetings, and it felt that Secretarial management was undesirable because it removed regional control over management. Under the Western Pacific proposal, the North Pacific and Pacific Councils would make management recommendations for fisheries in their areas and submit them to the Western Pacific Council, which would take final action on all measures for approval by the Secretary of Commerce.~~

The Western Pacific Council consulted the Pacific and North Pacific Councils on ~~the~~a proposal ~~for the~~made to be the single council ~~designation~~designated for HMS management. The Pacific Council opposed this approach. ~~At that time, the Pacific Council was not convinced of the need to alter management arrangements for HMS, and was concerned that the decision process might be neither convenient for, nor in the best interest of, fishery interests on the West Coast. Since the principal issue at the time was the need for coordinated and comprehensive data collection, the Pacific Council recommended that data collection gaps be documented and filled.~~

In July 1996, after receiving input from the affected councils and industry groups, ~~the~~ NMFS concluded that single council designation was not necessary at that time to achieve effective management under the Magnuson-Stevens Act or to support the Department of State in carrying out U.S. obligations. ~~With regard to data needs, NMFS stated that recent international agreements and implementing domestic legislation (High Seas Fishing Compliance Act, 16 U.S.C. 5501 et seq.) provided authority for NMFS to require U.S. vessels fishing for HMS to report their fishing activities. The Western Pacific Council continued to maintain that a comprehensive FMP with single council designation was necessary, and the issue was raised again at the Council Chairs’ meeting in June 1997. As a result of this discussion, the Director of NMFS asked the Southwest Regional Administrator to work with the three Pacific area councils to develop a recommendation on how to proceed.~~

At the September 1997 Pacific Council meeting, the Southwest Region of NMFS (now part of the West

²—Under the Magnuson-Stevens Act, for fisheries under the authority of more than one council, the Secretary of Commerce may designate one council to prepare the plan or may require the plan be prepared jointly by the concerned councils. In the latter case, the plan must be approved by a majority of the voting members of each council.

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Coast Region) presented a paper outlining options for Pacific Council involvement in HMS management. Options included no action, the Western Pacific proposal, Secretarial management, a joint FMP and a separate West Coast FMP. The paper summarized numerous activities at the national and international levels affecting HMS fisheries based on the West Coast. NMFS argued that the regional councils should play an active role in planning U.S. participation in future internationally managed HMS fisheries, and that the Pacific Council has unique capabilities for reaching the diverse fishing industry of the West Coast and involving them in the development of management policy. At that meeting, the Pacific Council established an HMS Policy Committee to address HMS issues and coordinate with the other councils. At the November 1997 meeting, the Council appointed a representative to attend meetings of the IATTC and MHLC negotiations underway to establish the WCPFC (the MHLC process) and recommended establishment of an inter-council coordinating committee. In June 1998, the Council appointed members to a West Coast HMS Advisory Subpanel comprised/composed of representatives of constituent groups.

In September 1998, representatives of the three Pacific area councils and NMFS met to discuss collaboration in HMS management. The NMFS Southwest Region (now the West Coast Region) presented a “straw man” approach for coordinated management. ~~The objectives of this approach were:~~

- ~~• to achieve effective conservation and management of HMS fisheries throughout the EEZ and adjacent waters to the extent practicable consistent with the Magnuson-Stevens Act and other applicable law, including international agreements;~~
- ~~• to ensure comprehensive collection of comparable and compatible data throughout the range of U.S. HMS fisheries;~~
- ~~• to ensure the ability to take action on a timely basis as the need arises; and~~
- ~~• to ensure that those who would be affected by management have ample notice of prospective action and opportunity to advise the decision makers about their interests and needs.~~

Under this approach, under which the existing Western Pacific Council FMP would serve as the foundation for the comprehensive plan. ~~It would be amended to include, among other things, framework management procedures for the Pacific Council. Each council would manage its respective fisheries independently, except when an action might affect the other council. In the latter case, both councils would vote. If there were disagreement, the councils would ask the Regional Administrator of NMFS to mediate the issue.~~

The ~~Western Pacific Council/WPFMC~~ did not support ~~the this~~ collaborative approach ~~proposed by NMFS, because it believed that joint actions would increase the work load, increase costs, delay implementation of regulations, and weaken the authority of the Western Pacific Council.~~

In June 1999, the Pacific Council voted to begin development of an FMP for HMS fisheries. The Council preferred that some form of comprehensive FMP be developed with all three councils involved and wrote the other two councils inviting their participation. While the Council recognized the difficulties associated with joint FMPs, it was optimistic that framework procedures and operational mechanisms could be developed to allow either independent or joint council actions as necessary and appropriate to achieve FMP objectives. While the North Pacific Council expressed support for a joint FMP, the Western Pacific Council stated that it was not inclined to participate at that time. The Pacific Council decided to begin development of a separate FMP for West Coast-based HMS fisheries, holding open the alternative of a comprehensive FMP in the future should the Western Pacific decide to participate.

In March 2001, NMFS wrote the Council to provide updated information on recent domestic HMS fishery management issues that had a bearing on the development of the FMP. ~~NMFS Regional Administrator Rebecca Lent stated:~~

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~~When the decision was made to develop the FMP, there was no clear and pressing need for consideration of management measures that would immediately go into effect. It was envisioned that the FMP could include some reporting requirements and perhaps some changes in permit requirements, and it would almost certainly establish framework procedures for implementing regulations in the future if new information or conditions warranted it. The FMP also could conceivably incorporate under Magnuson-Stevens Act authority a variety of regulations currently in effect under other Federal law or State laws and regulations. However, the legal and programmatic environment for the FMP changed substantially as a result of the following factors:~~

~~1. Drift Gillnet Fishery Management—This fishery has been managed under a mix of State laws (time/area closures, limited entry, mesh size, logbooks) and Federal regulations (net depth, pingers, observers) under the Marine Mammal Protection Act. As a result of a new Section 7 consultation under the Endangered Species Act (ESA), NMFS is requiring that new restrictions be imposed on the fishery by August 2001. NMFS will promulgate these regulations by that time under the authority of the ESA. However, I would urge the Council to be sure that the draft FMP, when cleared for public review and comment, include an alternative under which the drift gillnet fishery would be managed through the FMP rather than under the anticipated mix of State laws and regulations and Federal regulations under the MMPA and ESA. Consolidating the management program under a single authority should greatly simplify the ability of fishers and managers to adjust to changing conditions in the future.~~

~~In addition, the changes being required under the ESA will likely make it very difficult for some fishers to maintain profitable operations. This adds to the feeling on the fleet's part that there should be some form of relief, and a proposal has been made to allow the vessels to fish with longline gear subject to a variety of restrictions, possibly including an experimental fishery process. This is a very contentious proposal, but the drift net fleet owners definitely want the Council to address it in the FMP process. I would strongly encourage that the plan include a full evaluation of the pros and cons of allowing longline fishing in the EEZ so that the final decision can be based on that evaluation.~~

~~2. Hawaii Longline Fishery Restrictions—As a result of court actions, a number of restrictive regulations have been promulgated for the Hawaii-based longline fishery. In addition, NMFS prepared and distributed for public comment and hearings a Draft Environmental Impact Statement (DEIS) that reviewed the history and performance of that fishery and analyzed several alternatives for management of the fishery. I believe the Council has received a copy of that DEIS. While final action has not yet been taken, the preferred alternative would further constrain the fishery, including prohibiting a fishing strategy that targets swordfish and setting time/area closures for the fishery. NMFS also is completing a Section 7 consultation to determine if the fishery jeopardizes the continued existence of any species of sea turtle and if conditions should be set for the fishery to ensure that there will be no jeopardy and to mitigate or reduce the potential for interactions. NMFS recognizes that longline fishing in the EEZ, or on the high seas seaward of the EEZ, off the West Coast might not have the exact same impacts on fish and protected species as longlining out of Hawaii. However, NMFS also believes it would be inappropriate to allow fishing by vessels out of the West Coast in times and areas that would be closed to vessels out of Hawaii or using strategies that would not be available to Hawaii-based vessels until further information is available to indicate that the impacts would be different. At the least, the draft FMP should include an alternative that would establish the same measures for West Coast-based longliners as for Hawaii-based longliners. This also would include provisions to minimize interactions with seabirds and to authorize the Regional Administrator to require that observer accommodations be made and to require the use of automated vessel monitoring system units at vessel expense.~~

~~3. U.S.-Canada Albacore Treaty—During the scoping process for the FMP, there was sufficient force of recommendations from the public that the Council established a control date for possible use in setting up a limited entry program in the future. Most of the interest came from the troll albacore fishery~~

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~~which is concerned that further restrictions in other fisheries (especially groundfish) might result in vessels shifting into the albacore fishery, possibly adversely affecting present participants and exacerbating marketing problems that have sometimes occurred when catches are too high and markets are flooded with landings. Also of concern was that additional effort could result in lower catch rates for historic participants. A more recent concern, however, is that there has been a dramatic increase in the participation of Canadian vessels in U.S. waters under the Treaty, so much so that the Western Fishboat Owners Association has promoted suspension of the Treaty unless the Canadians agree to some limit on their vessels' fishing in U.S. waters. We have now scheduled a negotiating session with Canadian authorities April 10-11, 2001, in Seattle, to discuss changes in Annex A to the Treaty under which there would be a process for annually determining fleet or fishing limits and to discuss potential limits in 2001.~~

~~In discussing the matter with NOAA General Counsel and industry, we have identified a broader issue. That is, there is no statute to implement the Albacore Treaty; thus there is no statute authorizing NMFS (or anyone else) to issue regulations to carry out the Treaty. Before we can propose legislation, however, we need to consider and agree on how the FMP and Treaty interrelate. We need to consider what kinds of measures would best be handled by different agencies and through different procedures. We will be discussing with industry and General Counsel the manner in which different possible future fishery management measures might be carried out under the FMP or under the Albacore Treaty, or even under laws implementing other future international management agreements (e.g., IATTC). For example, if there were a total allowable catch of north Pacific albacore with an allocation to the U.S., the internal allocation between sectors could be done through the Council as with Pacific halibut; or it could be done by the Secretary of Commerce in consultation with the Council and the member States.~~

~~The consequence of these conditions or actions is that the Council~~As a result, the Council realized it needed to address immediate HMS fishery management regulation issues rather than to prepare only a framework plan. ~~The Council agreed that it might not be sufficient to simply leave in place existing state or federal regulations (under other authorities) or simply defer to state regulations.~~

1.6 Management Context

This FMP is intended to facilitate Council engagement with RFMOs, other international obligations that the U.S. is a party to, and domestic parties including the WPFMC and Indian Tribes.

1.6.1 International Entities and Agreements

~~1.6.1 Inter-American Tropical Tuna Commission (IATTC)~~

The U.S. is a member of the Inter-American Tropical Tuna Commission (IATTC), which was established in 1950. Pursuant to the Tuna Conventions Act of 1950, as amended, NMFS promulgates regulations to carry out IATTC recommendations that have been approved by the Department of State. ~~NMFS has implemented procedural regulations by which~~In 2003, parties to announce the IATTC quotas and associated management measures (e.g., incidental catch allowances when directed fishery quotas have been reached). ~~Other IATTC recommendations take longer to implement through full rule-making procedures, including provision for a public hearing, under the Tuna Conventions Act. While signed the IATTC Convention does not specify for the geographic boundaries~~Strengthening of the eastern Pacific Ocean, under regulations at 50 CFR Part 300, Subpart C, NMFS has defined Inter-American Tropical Tuna Commission Established by the “1949 Convention between the United States of America and the Republic of Costa Rica, commonly referred to “Antigua Convention.” The Antigua Convention defines the Convention Area² to consist of the waters bounded by the coast of the Americas, the 40°50' N and 40°50' S parallels, and the 150° W meridian.

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Historically, the species under IATTC purview included all HMS in the Convention Area and the IATTC focused almost exclusively on tropical tuna species (and especially yellowfin tuna) taken in purse seine, baitboat, and longline fisheries. However, the Antigua Convention promotes an ecosystem approach, which opens the possibility of considering other organisms that interact with HMS fisheries. Stock assessments by IATTC scientific staff are conducted regularly on tropical tunas ~~and occasionally on albacore and northern bluefin tuna and striped marlin.~~ The species under IATTC purview include all HMS in the Convention Area, and the scope of interest of the IATTC has expanded in recent years to include conservation measures to address additional species (e.g., bigeye tuna), fleet capacity (with focus on the purse seine sector), bycatch concerns in purse seine and longline sectors, the use of fish aggregating devices, and compliance.

~~In the past several years, NMFS has finalized regulations to carry out IATTC recommendations of special interest to this FMP. First, a regulation was implemented to collect vessel information for a regional register of all vessels that have harvested HMS in the IATTC Convention Area. The vessel register is intended to assist the IATTC in monitoring the international fisheries and supporting efforts to enhance compliance with IATTC conservation measures. The register will likely also prove very useful to the Council in its monitoring of West Coast-based HMS fisheries.~~

~~Second, a regulation was implemented to carry out a pilot bycatch reduction program. Under this program, purse seine vessels are required to retain and land all tuna brought on board the vessel, while releasing safely to the extent practicable all non-tuna species brought on board and taking special measures to minimize harm to any sea turtles caught in the purse seine. This approach was undertaken to deal with bycatch concerns. It is hoped that the full retention requirement will encourage the development of gear or techniques that will reduce the amount of low-value tuna (especially small yellowfin and bigeye tuna) brought on board so that the vessels will not be economically disadvantaged by the full retention program. This pilot program is to run through 2004, at which point IATTC will evaluate the effects and effectiveness of the program.~~

~~The regulations currently implementing this convention also require that U.S. purse seine vessel operators maintain logbooks of catch and effort and to make them available to U.S. enforcement and fishery officials for inspection. If IATTC logbooks are maintained and submitted to IATTC, then the federal reporting requirement is met.~~

~~In addition, at its 2002 meeting, the IATTC went one step further and adopted a recommendation to use the vessel register as the authoritative source of identified purse seine vessels qualified to fish for tuna in the Convention Area in the future. NMFS will be required to promulgate regulations to implement this measure if the Department of State approves it.~~

~~The IATTC Convention is not entirely consistent with the Magnuson-Stevens Act. The Convention establishes a simple goal of achieving maximum sustainable yields from the tuna stocks and not optimum yield from the complex of HMS species in the Convention Area. It is only in the Convention Area that regulations to implement IATTC recommendations generally apply; NMFS has not attempted to apply IATTC recommendations beyond these waters. Further, the Tuna Conventions Act does not provide authority to manage U.S. fisheries for tuna in the Convention Area except as called for by IATTC recommendations approved by the Department of State. However, the IATTC and FMP management programs can support each other. In the future, the FMP could provide a mechanism to implement certain measures agreed to by the IATTC or to ensure that regulations adopted to apply in the Convention Area are complemented if necessary and appropriate by regulations to apply to U.S. vessels fishing the same stocks in waters beyond the Convention Area. The Council HMS management process also can serve to help in formulating or evaluating management recommendations that the U.S. delegation (headed by the Department of State) can take to the IATTC for consideration or possibly to comment formally on IATTC~~

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~~proposals and actions. Any permits and data reporting required by this FMP can aid the U.S. in being responsive to IATTC requests for information. Conversely, data collected or reported under the Tuna Conventions Act can be provided to support implementation of this FMP. It is noted that the Department of State is restructuring its general public advisory committee, and there may be some overlapping interests in both that committee and the Council's HMS advisory subpanel or Council membership.~~

~~The International Dolphin Conservation Program Act (IDCPA) was established in 1992 by the multi-lateral Agreement on the International Dolphin Conservation Program (AIDCP) was signed in 1998. The AIDCP succeeded the 1992 Agreement on the Conservation of Dolphins and (La Jolla Agreement) which was revised and extended later enhanced in 1999/1995 by the Agreement on the International Dolphin Conservation Program Declaration of Panama. The IATTC provides the secretariat for the Program AIDCP. The objectives of the Program AIDCP are: 1) to progressively reduce incidental dolphin mortalities in the tuna purse-seine fisheries in the Agreement Area to levels approaching zero, by through the setting of annual limits; 2) with the goal of eliminating dolphin mortality in this fishery, to seek ecologically sound means of harvesting capturing large yellowfin tunas not in association with dolphins; and 3) to ensure the long term sustainability of tuna and other species and to avoid, reduce and minimize the tuna stocks in the Agreement Area, as well as that of the marine resources related to this fishery, taking into consideration the interrelationship among species in the ecosystem, with special emphasis on, inter alia, avoiding, reducing and minimizing bycatch and discards of juvenile tunas and non-target species. The bycatch provisions referred to above are consistent with the IDCPA. The International Dolphin Conservation Program Act (IDCPA), among other things, amended the Marine Mammal Protection Act to implement the Declaration of Panama, including the objectives of the International Dolphin Conservation Program, into US law.~~

~~1.6.3 Western and Central Pacific Fisheries Commission]~~

~~The FMP could provide a mechanism for implementation of U.S. responsibilities under an international agreement to conserve central Western and western Pacific HMS. The U.S. participated in negotiation of and signed the new international agreement developed through the Multi-Lateral High Level Conference for Conservation and Management of Tuna and Tuna-Like Species of the Central and Western Pacific (MHLC). This effort Fisheries Commission was undertaken to develop an international arrangement to achieve long term conservation and management of HMS in the central and western Pacific. The international established by the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, which entered into force on April 19, 2004. The Convention establishes a Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, now more commonly referred to as the Western and Central Pacific Fishery Commission (WCPFC). A noteworthy aspect of the Convention is the fact that it will exercise management control into the high seas zones outside national EEZs in contrast to some other regional fishery management organizations. While West Coast interests may seem are only peripherally involved, it should be noted that there is a in management of major tuna fisheries in the WCPO, the WCPFC's Northern Committee that may make makes recommendations for management of such species as North Pacific swordfish, albacore, and bluefin, all of which are of interest to West Coast fisheries. It will be important for the WCPFC to coordinate with the IATTC on stocks that occur in waters of both entities' purview. It is expected that scientists from both areas will frequently meet and will develop protocols for exchanging information and collaborating on stock and fishery assessments for shared stocks.~~

Interim Scientific Committee (from previous Section 1.6.9)

~~The International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC) The ISC evolved through a series of consultations between the U.S. and Japan with a twofold purpose: 1) To enhance scientific research and cooperation for conservation and rational utilization of the species of~~

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tuna and tuna-like fishes which inhabit the north Pacific Ocean during a part or all of their life cycle; and
2) To establish the scientific groundwork, if at some point in the future, it is decided to create a multilateral regime for the conservation and rational utilization of these species in this region.

Current ISC membership can include coastal states/economies of the region and states/economies with vessels fishing for these species in the region. Observer participants include relevant intergovernmental fishery organizations, relevant intergovernmental marine science organizations and other entities with vessels fishing for these species in the region.

This membership includes Canada, Chinese-Taipei, Japan, Republic of Korea, Mexico, People's Republic of China, and the U.S. are members. Non-voting membership include the FAO, North Pacific Marine Science Organization (PICES), Pacific Community (SPC), and WCPFC; and cooperating non-membership includes the IATTC. Nongovernment organizations participate at ISC meetings as observers. The ISC is the science provider for the WCPFC Northern Committee through a Memorandum of Understanding.

The ISC regularly assesses and analyzes fishery and other relevant information concerning northern stocks. It meets annually in a plenary session and develops conservation recommendations for northern stocks. It also formulates research proposals and coordinates research on northern stocks. Through an MOU, the ISC is the science provider for the WCPFC Northern Committee.

The ISC operates through working groups composed of scientific experts from organizations affiliated with both member and non-member nations. This includes Albacore, Billfish, Pacific bluefin tuna, Shark, and Statistics working groups who meet periodically.

~~1.6.2 U.S.-Canada Albacore Treaty~~

In 1981, the United States and Canada entered into ~~a treaty~~the U.S.-Canada Albacore Treaty regarding fishing for albacore tuna in the eastern Pacific. Under the treaty, U.S. albacore vessels are authorized to fish for albacore in waters under the jurisdiction of Canada and more than 12 miles from the baseline from which the territorial sea is measured and to use certain port facilities in Canada. Albacore may be landed in that port for sale, export, or transshipment back to the U.S. Similarly, Canadian vessels are authorized to fish in waters under U.S. jurisdiction more than 12 miles from the baseline from which the territorial sea is measured and to use certain U.S. ports to obtain supplies and other services. Albacore may be landed in those ports for sale, export, or transshipment back to Canada. The parties annually exchange lists of vessels that may fish in the other nation's zone, though these lists are not binding (that is, a vessel on a list is not obliged to fish in the other nation's waters). Logbooks of catch and effort are to be maintained, and the nations are to exchange data on the fisheries. ~~There is no legislation to implement the Treaty~~The agreement was amended in 2002 and codified by law in April 2004.

~~The implementation of the treaty has been sporadic. Vessel lists have been exchanged, but there have not been regular exchanges of data, nor has there been an effective monitoring program to determine the level of fishing by each nation's vessels under the treaty at the time of plan adoption. In recent years, there has been much more fishing by Canadian vessels in U.S. waters than fishing by U.S. vessels in Canadian waters. In fact, in 2000, the level of fishing by Canadian vessels and the consequent crowding on the grounds resulted in calls by some in the U.S. troll industry to convene a meeting to discuss the treaty with Canadian officials. Such a meeting was held in November 2000. There was agreement on a number of immediate steps, including a need for cooperative efforts to establish a better data collection and exchange program and action to establish "check in, check out" procedures so that the level of fishing in each zone by the vessels of the other nation can be monitored effectively. There also was general agreement that future meetings would be necessary to consider negotiation of amendments to the treaty to address the U.S. troll industry concerns as well as to ensure full exchange of information about management problems and~~

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~~possible solutions. Both nations are developing management programs for albacore fisheries and both parties recognize that effective albacore conservation will require international cooperation, whether through the IATTC, the WCPFC (see Section 1.6.3), or some other mechanism.~~

~~There were three negotiating sessions (April and June 2001 and April 2002), and agreement was reached at the last session on changes in the Treaty. Under that agreement, limits on reciprocal fishing would be implemented and there would be a gradual decrease over three years in the allowable foreign fishing by vessels of one party in the waters of the other party. Specifically, beginning in 2004, there would be a three year regime for reciprocally limiting effort by U.S. and Canadian troll albacore fishing vessels' activities in each other's waters. Canadian effort would be limited in terms of numbers of vessels; U.S. effort would be limited in terms of vessel months. This is intended to provide relatively equal fishing opportunity. The limits would gradually be reduced over the 3 year period, though the agreement provides some flexibility to carry over "unused" effort from one year to the next.~~

~~The limits would be as follows:~~

<u>Year</u>	<u>Canadian boats in the U.S. EEZ</u>	<u>U.S. effort in Canadian EEZ</u>
2003	170 vessels	680 vessel months
2004	140 vessels	560 vessel months
2005	125 vessels	500 vessel months

~~After the third year, the Parties can extend the agreement for one year or more, but if no agreement is reached, then a default of 75% of the third year would be implemented. Further meetings of the Parties and industries will be necessary to develop and implement effective reporting and monitoring mechanisms to ensure that fishing remains within the limits.~~

1.6.4 United Nations Agreements

~~The FMP may provide a mechanism for implementing U.S. responsibilities under the United Nations Agreements: The United Nations Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (known as the UNIA or Fish Stocks Agreement) under the Law of the Sea Treaty. The UNIA interprets the duty of nations to cooperate in conservation and management of fishery resources. Measures adopted in the EEZ of a coastal state and by any international arrangement for HMS in the region should be compatible. The Agreement was adopted in 1995 by the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks and the requirements for the entry into force of the Agreement were met on 11 November 2001. A coastal state should not adopt measures that would undermine the effectiveness of regional measures to achieve conservation of the stocks. In the case of the Pacific Council, for example, while the UNIA does not dictate how management of HMS fisheries in the U.S. EEZ should be carried out, the UNIA requires that EEZ management be compatible with management under any international arrangement (such as the IATTC, for species that are under IATTC conservation measures). The UNIA is now in force as the requisite number of nations has ratified it.~~

The U.S. also has participated in deliberations and decisions of the Food and Agriculture Organization of the United Nations (FAO) that have implications for HMS management under the FMP. The Committee on Fisheries of FAO has agreed to international plans of action dealing ~~with shark conservation, seabird interactions with longline gear, and fishing capacity on a variety of conservation issues. The international plans of action (IPOAs) are voluntary instruments elaborated within the framework of the Code of Conduct for Responsible Fisheries. They apply to all States and entities and to all fishers. Four IPOAs have been~~

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~~developed to date: International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds), for the Conservation and Management of Sharks (IPOA-Sharks) to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), for the Management of Fishing Capacity (IPOA-Capacity).~~ In turn, the United States has developed national plans of action (NPOAs) to carry out the objectives of the international plans of action. The FMP can provide a mechanism for considering and implementing specific actions that support these national plans of action. In fact, the seabird avoidance measures ~~proposed in~~implemented through this FMP are consistent with the seabird NPOA.

~~1.6.5~~ 1.6.2 *High Seas Fishing Compliance Act (HSFCA)*

~~The FMP also may provide an implementing mechanism for the U.N. Agreement to Promote Compliance with~~The International Conservation and Management Measures by Fishing Vessels on the High Seas,~~which~~ was adopted by the U.N. Food and Agriculture Organization (FAO) in November 1993. It establishes the responsibility of each nation for the actions of vessels fishing under that nation's flag on the high seas. The agreement requires that vessels have specific authorization from their flag nation to participate in high seas fishing. Further, nations must maintain a registry of authorized vessels, ensure that those vessels are marked for identification according to international standards, and ensure that they report sufficient information on their fishing activities. The High Seas Fishing Compliance Act (HSFCA) is the domestic legislation enacted in 1995 to provide authority to the Secretary of Commerce to implement this FAO Agreement.

~~NMFS has implemented regulations requiring U.S. vessel operators fishing on the high seas to maintain and submit records of catch and effort on their high seas fishing activities. The reporting requirement would be met if a vessel operator is reporting in compliance with regulations under another federal statute (e.g., MSFCMA requirements). Thus, longline vessel operators fishing outside the EEZ, but based on the West Coast, must maintain and file the new federal logbook, and West Coast albacore trollers must maintain and file a troll logbook. NMFS provides the required forms or logbooks. Fishermen are not required to report catch and effort within the EEZ under this requirement, although NMFS has asked that all activity be recorded. The FMP can supersede the HSFCA reporting requirements and thus provide a mechanism to harmonize eastern and western Pacific fishery reporting and monitoring mechanisms.~~

~~1.6.6~~ 1.6.3 *Western Pacific Pelagics FMP*

The initial Western Pacific FMP was adopted in 1987 and included initial estimates of maximum sustainable yield (MSY) for the stocks and set optimum yield (OY) for these fisheries in the EEZ. The regulations applied to domestic and foreign fishing for billfishes, wahoo, mahimahi, and oceanic sharks. Among the original regulations were a prohibition on drift gillnet fishing within the region's EEZ and provisions for experimental fishing permits. The FMP prohibited foreign longline vessels from fishing within certain areas of the EEZ. Additional areas up to 150 nm from Guam and the main Hawaiian Islands and up to 100 nm from the Northwestern Hawaiian Islands may be closed to foreign longline vessels if their fishing activity is causing adverse impacts on domestic fishery performance, excessive waste of catch, excessive enforcement costs, or adverse effects on stocks. No legal foreign longline fishing has occurred under the FMP. The WPFMC substantially reorganized its existing FMPs to create regional fishery ecosystem plans. One of these, which replaced the Pelagics FMP is the Pelagic Fishery Ecosystem Plan, implemented in 2009.

~~The initial FMP defined optimum yield as the amount of each species in the management unit that will be caught by domestic and foreign vessels fishing in the EEZ in accordance with the measures in the FMP. At that time, the principal concern was regulation of the foreign longline fishery in the EEZ to ensure that foreign catches of billfish, mahimahi, wahoo, and oceanic sharks would not adversely affect domestic commercial and recreational fisheries for these species.~~

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~~The initial FMP specified domestic annual harvest and total allowable level of foreign fishing in non-numeric terms, i.e. the amount of fish that could be caught while fishing in accordance with the management measures in the FMP. The FMP also addressed joint venture processing for billfish and other non-tuna species by stating that practically all fish caught by vessels in the EEZ are landed in a whole or dressed state without processing, and processors handle whatever processing that is performed; thus, there is no allowance for joint venture processing.~~

~~The FMP has subsequently been amended numerous times to revise definitions, establish a limited entry program for the Hawaii domestic longline fishery, establish a variety of additional management measures, address protected species interactions, and address overfishing. (These amendments may be accessed at <http://www.wpcouncil.org/pelagic.htm>.)~~

Protected Marine Resources and Longline Fishery Interactions

~~Twelve federally protected marine animals are known to have interactions with Hawaii-based longline vessels within or beyond the EEZ surrounding the Hawaiian archipelago. (1) Marine Mammals: Hawaiian monk seal (*Monachus schauinslandi*)—endangered; Humpback whale (*Megaptera novaeangliae*)—endangered; False killer whale (*Pseudorca crassidens*)—protected; Dolphin spp.—protected. (2) Sea Turtles: Green turtles (*Chelonia mydas*)—threatened; leatherback turtle (*Dermochelys coriacea*)—endangered; Olive ridley turtle (*Lepidochelys olivacea*)—endangered; Loggerhead turtle (*Caretta caretta*)—threatened; Hawksbill turtle (*Eretmochelys imbricata*)—endangered. (3) Sea Birds: Laysan albatross (*Phoebastria immutabilis*)—protected; Black footed albatross (*P. nigripes*)—protected; Short tailed albatross (*P. albatrus*)—endangered; Booby (*Sula sp.*)—protected.~~

Species in the Management Unit

~~The Western Pacific FMP, as amended through Amendment 7, includes the following fish species:~~

~~mahimahi (dolphinfish) *Coryphaena spp.*
marlin and spearfish — *Makaira spp.*
Tetrapturus spp.
oceanic sharks — family Alopiidae
family Carcharhinidae
family Lamnidae
family Sphyrnidae
sailfish — *Istiophorus spp.*
swordfish — *Xiphias sp.*
tuna and related spp. — *Allothunnus sp.*
Auxis spp.
Euthynnus spp.
Gymnosarda sp.
Katsuwonus sp.
Scomber spp.
Thunnus spp.
wahoo — *Acanthocybium sp.*
moonfish (opah) — *Lampris sp.*
pomfret — family Bramidae
oilfish (walu) — family Gempylidae~~

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~~Longline Fishery Restrictions to Protect Sea Turtles and Seabirds as of 2003~~

~~On December 27, 1999 (64 FR 72290), NMFS issued, under the authority of the Magnuson-Stevens Act, an emergency interim rule, effective for 180 days, closing certain waters to fishing by the Hawaii-based longline fishery. The intent was to reduce adverse impacts to sea turtles resulting from the fishery while NMFS prepared a comprehensive EIS for the FMP. The objective was to have appropriate time and area closures based upon the greatest benefit to sea turtles while considering the costs to the longline fishery. Subsequently, NMFS issued a proposed rule (65 FR 8107, February 17, 2000), requiring possession and use of line clippers and dip nets aboard vessels registered for use under a Hawaii longline limited access permit. Line clippers and dip nets were to be used to disengage sea turtles hooked or entangled by longline fishing gear. The rule required specific methods for handling, resuscitating, and releasing sea turtles. The final rule was published on March 28, 2000 (65 FR 16346). The December 27, 1999, emergency interim rule was extended on June 19, 2000 (65 FR 37917). The temporary area closure was maintained until December 23, 2000, or until new time and area closures, as imposed by the Court, were implemented by NMFS.~~

~~On July 5, 2000 (65 FR 41424), NMFS issued a proposed rule to require Hawaii-permitted operators to use two or more of six specific bird mitigation techniques when fishing with pelagic longline gear north of 25° N latitude; annually attend a protected species workshop conducted by NMFS; and release all hooked or entangled sea birds in a manner that maximizes their post-release survival. The rule was intended to reduce fishery impacts on black-footed and Laysan albatrosses that are accidentally hooked or entangled and killed by Hawaii pelagic longliners during the setting and hauling of longline gear. The rule was also expected to reduce the potential for interactions between pelagic longline fishing vessels and endangered short-tailed albatrosses, which are known to occasionally visit the Northwestern Hawaiian Islands.~~

~~On August 16, 2000 (65 FR 49968), NMFS published a notice of an August 4, 2000, order of the United States District Court for the District of Hawaii (65 FR 49968), which amended the Court's earlier Orders Of Injunction. The order would remain in effect until NMFS completed an EIS by April 1, 2001, analyzing the effect of fishing activities regulated under the Western Pacific Pelagics FMP. Under the order, certain areas were closed year-round to fishing by vessels engaged in the Hawaii-based pelagic longline fishery and other areas are seasonally closed. In certain areas, limitations were placed on fishing effort and 100 percent observer coverage was required. In the remaining area, fishing for swordfish was prohibited; observer coverage had to be increased to 10 percent by September 21, 2000, and to 20 percent by November 2, 2000, and vessel operators were required to submit written reports to NMFS within 5 days of returning to port of any swordfish taken during that trip. NMFS had to make observer reports available to the court by the first of each month, continue to require Hawaii longline vessels to carry and use NMFS-approved line clippers and dip nets, and continue its research into the effects of several different gear modifications to reduce or eliminate the incidental catch of sea turtles. On August 25, 2000 (65 FR 51992), NMFS published an emergency interim rule replacing the previous emergency rule and implemented the court's August 4th order. On November 3, 2000 (65 FR 66186), NMFS published changes to the emergency interim rule restricting fishing for swordfish in a specific area, established requirements for setting longline gear, and prohibited light sticks. On February 22, 2001 (66 FR 11120), NMFS published an extension to the emergency rule. On March 19, 2001 (66 FR 15358), NMFS published an emergency interim rule that closed the longline fishery during a specific period and clarified closure requirements. On April 19, 2001 (66 FR 20134), NMFS published a notice that announced the terms of the March 30, 2001, order of the court, which modified the previous order of August 4, 2000. The order restricted the Hawaii-based longline fishery based on the preferred alternative of the Final FEIS, which had been completed according to the court's order.~~

~~On June 12, 2001 (50 CFR Part 660, 66 FR 31561), NMFS issued an emergency interim rule, effective for 180 days, applicable to vessels registered for use under a Hawaii longline limited access permit. The rule:~~

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~~prohibits the targeting of swordfish north of the equator by Hawaii longline vessels; prohibits longline fishing by Hawaii longline vessels in waters south of the Hawaiian Islands (from 15° N latitude to the equator, and from 145° W longitude to 180° longitude) during the months of April and May; allows re-registration of vessels to Hawaii longline limited access permits only in October; imposes additional sea turtle handling and resuscitation measures; and requires all Hawaii longline vessel operators to attend an annual protected species workshop. This rule implements the order issued on March 30, 2001, by the court and supersedes the court's order of August 4, 2000, and the rule supersedes the emergency rules published on August 25, 2000; November 3, 2000; February 22, 2001; and March 19, 2001. Other parts of this emergency interim rule implement the terms and conditions contained in the November 28, 2000, Biological Opinion (BO) issued by the U.S. Fish and Wildlife Service on the effects of the Hawaii-based longline fishery on the endangered short-tailed albatross. To protect albatrosses, thawed, blue-dyed bait and practicing strategic discard of offal are required while fishing north of 23° N latitude. Observer coverage of 20% also is required. The rule is effective through December 10, 2001. On December 10, 2001 (66 FR 63631), the emergency rule was extended to June 8, 2002. This emergency rule also established basket-style longline gear as approved gear for the fishery.~~

~~On April 5, 2002 (67 FR 16323), NMFS published an emergency interim rule, also effective until June 8, 2002, which prohibits longline fishing north of 26° N latitude, and prohibits the retention or landing of more than 10 swordfish per trip by Hawaii longline vessels that fish north of the equator.~~

~~On April 29, 2002 (67 FR 20945), NMFS published a proposed rule establishing sea turtle take mitigation measures in the Hawaii-based longline fishery. The regulations would implement gear specifications for longline gear, prohibit targeting swordfish north of the equator, prohibit landing or possessing more than 10 swordfish per trip by longline vessels fishing north of the equator, establish a closed area during April and May south of Hawaii between the equator and 15° N latitude, and require all longline vessel operators to attend a protected species workshop annually. This rule would implement the reasonable and prudent measures of the March 29, 2001, biological opinion issued by NMFS under the Endangered Species Act. This proposed rule contains the 10 swordfish possession restriction that appears in the April 5, 2002, emergency interim rule mentioned above, but does not propose prohibiting longline fishing north of 26° N latitude.~~

~~On May 6, 2002 (67 FR 30346), NMFS published a proposed rule that would establish permit and reporting requirements for any U.S. fishing vessel that uses troll or handline fishing gear to harvest pelagic management unit species in waters around certain U.S. possessions in the western Pacific, referred to as Pacific Remote Island Areas.~~

~~On May 14, 2002 (67 FR 34408), NMFS published a final rule governing seabird mitigation measures in the Hawaii-based longline fishery. The regulations require fishermen to use line-setting machines and thawed blue-dyed bait and strategic offal discards during setting and hauling of longline gear. This rule codifies the terms and conditions of a biological opinion issued by the U.S. Fish and Wildlife Service on November 28, 2000, to protect the endangered short-tailed albatross. The rule also implements measures recommended by the Western Pacific Council in a proposed rule published on July 5, 2000 (mentioned above).~~

~~1.6.7—~~ 1.6.4 *Relationship to Existing Fishery Management*

~~As indicated in Section 1.6.6, An aspiration of the Council in adopting this FMP willis to provide a basis for harmonizing management of fisheries by U.S. vessels that fish in both the western and eastern Pacific through engagement with the international entities and agreements described in Section 1.6.1. However, in addition, the FMP can be a mechanism for consolidating federal marine resources management responsibilities under a single set of rules. For example, the drift gillnet fishery is currently subject to~~

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~~controls under California law and regulations and under Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) regulations. To obtain the complete set of regulations, a fisher would have to go to three sources. Under the FMP, additional regulations would be implemented under Magnuson-Stevens Act authority. It would be reasonable to seek an approach under which at the least, all federal regulations could be found in one place and under a single statutory authority. If the MMPA and ESA regulations were essentially integrated into the FMP process, then this could be accomplished. This would be consistent with the provision of the Magnuson-Stevens Act that a FMP must be consistent with other applicable law. It also would be consistent with the ESA mandate to use all available authorities to further the purposes of that law. Further, by incorporating these regulations into the FMP process, the Council and NMFS would effectively~~The FMP also can be a mechanism for coordinating HMS management responsibilities stemming from state laws and regulations, the Marine Mammal Protection Act (MMPA), and the Endangered Species Act (ESA). Such coordination could also provide an open and continuing process for considering the possible need for changes in those regulations as conditions change or new information becomes available. ~~Under this approach, fishery participants might find it easier to understand what is required and why.~~

~~1.6.8~~ 1.6.5 *Treaty Indian Fishing Rights*

Legal Considerations

Treaties between the United States and numerous Pacific Northwest Indian tribes reserve to these tribes the right of taking fish at usual and accustomed grounds and stations (“u & a grounds”) in common with all citizens of the United States. See *U.S. v. Washington*, 384 F. Supp. 312, 349-350 (W.D. Wash. 1974).

The National Marine Fisheries Service recognizes four tribes as having u & a grounds in the marine areas managed by this FMP: the Makah, Hoh, and Quileute tribes, and the Quinault Indian Nation. The Makah Tribe is a party to the Treaty of Neah Bay, Jan. 31, 1855, 12 Stat. 939. See 384 F. Supp. at 349, 363. The Hoh and Quileute tribes and the Quinault Indian Nation are successors in interest to tribes that signed the Treaty with the Quinault, et al. (Treaty of Olympia), July 1, 1855, 12 Stat. 971. See 384 F. Supp. at 349, 359 (Hoh), 371 (Quileute), 374 (Quinault). The tribes' u&a grounds do not vary by species of fish. *U.S. v. Washington*, 157 F. 3d 630, 645 (9th Cir. 1998).

The treaty fishing right is generally described as the opportunity to take a fair share of the fish, which is interpreted as up to 50 percent of the harvestable surplus of all species of fish and shellfish that pass through the tribes' u&a grounds. *Washington v. Washington State Commercial Passenger Fishing Vessel Association*, 443 U.S. 658, 685-687 (1979) (salmon); *U.S. v. Washington*, 459 F. Supp. 1020, 1065 (1978) (herring); *Makah v. Brown*, No. C85-160R, and *U.S. v. Washington*, Civil No. 9213 - Phase I, Subproceeding No. 92-1 (W.D. Wash., Order on Five Motions Relating to Treaty Halibut Fishing, at 6, Dec. 29, 1993) (halibut); *U.S. v. Washington*, 873 F. Supp. 1422, 1445 and n. 30 (W.D. Wash. 1994), aff'd in part and rev'd in part, 157 F. 3d 630, 651-652 (9th Cir. 1998), cert. denied, 119 S.Ct. 1376 (1999) (shellfish); *U.S. v. Washington*, Subproceeding 96-2 (Order Granting Makah's Motion for Summary Judgment, etc. at 4, November 5, 1996) (Pacific whiting). The court applied the conservation necessity principle to federal determinations of harvestable surplus in *Makah v. Brown*, No. C85-160R/ *United States v. Washington*, Civil No. 9213 - Phase I, Subproceeding No. 92-1, Order on Five Motions Relating to Treaty Halibut Fishing, at 6-7, (W.D. Wash. Dec. 29, 1993); *Midwater Trawlers Co-op. v. Department of Commerce*, 282 F.3d 710, 718-719 (9th Cir. 2002).

~~The treaty right was originally adjudicated with respect to salmon and steelhead. However, it is now recognized as applying to all species of fish and shellfish within the tribes' u&a grounds.~~ *U.S. v. Washington*, 873 F.Supp. 1422, 1430, aff'd 157 F. 3d 630, 644-645 (9th Cir. 1998), cert. denied, 119 S.Ct. 1376; *Midwater Trawlers Co-op. v. Department of Commerce*, 282 F.3d 710, 717 (9th Cir. 2002) [~~“The~~

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~~term ‘fish’ as used in the Stevens Treaties encompassed all species of fish, without exclusion and without requiring specific proof. (citations omitted)”[2002]~~

~~The original 1974 District Court decision in U.S. v. Washington specifically references a Makah tuna (albacore) vessel:~~

~~There are presently eight [Makah] boats of commercial size fishing on the high seas. Three of these boats are gill netting in the Strait of Juan de Fuca, four are trolling, and one is tuna fishing. The commercial boats are thirty six feet in length except that the tuna boat is fifty four feet in length. (citation omitted) These boats were obtained by the tribe using its resources to acquire the boats and are managed by a tribal corporation. (citation omitted) These commercial boats go as far as fifty miles out to sea, east to Puget Sound and south to Westport and the Columbia River. (citation omitted)~~

U.S. v. Washington, 384 F.Supp. 312, 364-365 (W.D. Wash. 1974).

The National Marine Fisheries Service recognizes the areas set forth in the regulations cited below as marine u&a grounds of the four Washington coastal tribes. The Makah u&a grounds were adjudicated in U.S. v. Washington, 626 F.Supp. 1405, 1466 (W.D. Wash. 1985), aff’d 730 F.2d 1314 (9th Cir. 1984); see also Makah Indian Tribe v. Verity, 910 F.2d 555, 556 (9th Cir. 1990); Midwater Trawlers Co-op. v. Department of Commerce, 282 F.3d 710, 718 (9th Cir. 2002). The u&a grounds of the Quileute, ~~Hoh~~, and Quinault tribes were adjudicated in United States v. Washington, 2:09-sp-00001-RSM, (W.D. Wash. Sept. 3, 2015). The u&a grounds of the Hoh tribe have been recognized administratively by NMFS. See, e.g., 67 Fed. Reg. 30616, 30624 (May 7, 2002) (u&a grounds for salmon); 50 C.F.R. 660.324(c) (u&a grounds for groundfish); 50 C.F.R. 300.64(i) (u&a grounds for halibut). The u&a grounds recognized by NMFS may be revised as ordered by a federal court.

The legal principles described above support the conclusion that treaty Indian fishing rights apply to highly migratory species that pass through the coastal tribes’ ocean u&a grounds. The quantity of this right has not yet been determined or adjudicated.

Prospective Tribal Fisheries for HMS at the Time of FMP Adoption

~~Three Makah boats are presently reported to fish for albacore. They fish mostly beyond the EEZ, but sometimes within the EEZ. Landings are either in Ilwaco, Washington, or in Canada pursuant to the “Treaty Between the Government of the United States of America and the Government of Canada on Pacific Coast Albacore Tuna Vessels and Port Privileges (1981).” One Makah fisherman is currently planning to fish for thresher shark. In addition, two Quinault boats and one Quileute boat plan to fish for HMS. Currently there is no regulatory impediment to the tribes’ pursuit of HMS fisheries. However, although it is possible that specific treaty Indian allocations may be necessary in the future. To anticipate this eventuality, and to establish an orderly process for implementing treaty fisheries, this FMP authorizes adoption of procedures to accommodate treaty fishing rights in the implementing regulations (see Chapter 8).~~

1.6.9—Other International Entities

Standing Committee on Tuna and Billfish (SCTB)

~~The SCTB evolved from a committee of international scientists charged with review of the work of the Offshore Fisheries Program of the Secretariat of the Pacific Community (SPC; formerly the South Pacific Commission) to a more general committee with the following terms of reference:~~

- ~~• Coordinate fisheries data collection, compilation and dissemination according to agreed~~

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- ~~principles and procedures;~~
- ~~• Review research on the biology, ecology, environment and fisheries for tuna and associated species in the western and central Pacific Ocean;~~
- ~~• Identify research needs and provide a means of coordination, including the fostering of collaborative research, to most efficiently and effectively meet those needs;~~
- ~~• Review information pertaining to the status of stocks of tunas and associated species in the western and central Pacific Ocean, and to produce statements on stock status where appropriate; and~~
- ~~• Provide opinion on various scientific issues related to data, research and stock assessment of western and central Pacific Ocean tuna fisheries.~~

~~Participation on the SCTB is open to scientists and others with an interest in the tuna fisheries of the western and central Pacific Ocean. The participation of scientists from coastal states and territories of the region, scientists from countries whose vessels fish in the region, and scientists from international tuna fishery management organizations is encouraged.~~

~~The 1999 annual meeting of the SCTB included 81 participants from American Samoa, Australia, Canada, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Japan, Kiribati, Korea, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Philippines, Samoa, Taiwan, Tonga, Tuvalu, USA, Vanuatu, Wallis & Fortuna, Forum Fisheries Agency, Inter American Tropical Tuna Commission, and the SPC.~~

~~To perform its functions the SCTB formed a Statistics Working Group, and various species research groups which include skipjack, yellowfin, bigeye and albacore, and a research group for billfish and bycatch species.~~

~~Reports and information are available from the Secretariat of the Pacific Community, Noumea, New Caledonia.~~

Interim Scientific Committee (ISC)

~~The ISC evolved through a series of consultations between the U.S. and Japan with a twofold purpose:~~

- ~~• To enhance scientific research and cooperation for conservation and rational utilization of the species of tuna and tuna-like fishes which inhabit the north Pacific Ocean during a part or all of their life cycle; and~~
- ~~• To establish the scientific groundwork, if at some point in the future, it is decided to create a multilateral regime for the conservation and rational utilization of these species in this region.~~

~~The ISC membership can include coastal states/economies of the region and states/economies with vessels fishing for these species in the region. Observer participants include relevant intergovernmental fishery organizations, relevant intergovernmental marine science organizations and other entities with vessels fishing for these species in the region.~~ **Current membership includes Canada, Chinese Taipei, Japan, Korea, Mexico, People's Republic of China, U.S., IATTC and SPC.**

~~The functions of the ISC are to:~~

- ~~1. Regularly assess and analyze fishery and other relevant information concerning the species covered;~~
- ~~2. Prepare a report on its findings or conclusions on the status of such species such as trends in~~

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- ~~population abundance of such species, developments in fisheries, and conservation needs;~~
- ~~3. Strive to adopt reports and findings by consensus of all Members, however, it is not necessary that consensus is achieved on all matters, and reports and findings may reflect options and differing views when a consensus has not been achieved;~~
 - ~~4. Formulate proposals for conduct of and, to the extent possible, coordinate international and national programs of research addressing such species; and~~
 - ~~5. Consider any other matters, as appropriate, at the request of one of the members.~~

~~Species currently considered by the ISC include swordfish, bigeye tuna, northern bluefin tuna, yellowfin tuna, blue and striped marlins, and north Pacific albacore. Additional species such as sharks, wahoo, and sailfish may be considered at a later date.~~

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4.0 Preventing Overfishing and Achieving Optimum Yield

This chapter describes the framework for controlling catch from HMS fisheries to achieve the overall objective of optimum yield. As discussed throughout, domestic catches are often only a small fraction of the stock-wide harvest. (The HMS SAFE document periodically reports the fraction of stock-wide catch represented by West Coast fisheries). Most HMS MUS~~These reference points are guideposts for managing exploited stocks and require being able to determine and monitor the effects of fishing. But such effects are not always clear, e.g., catch per unit of effort trends may not only reflect the abundance of HMS, but also how fishing success is affected by schooling or wide-ranging behaviors, fishing efficiency, and environmental effects on the availability of species. Estimated population status of management unit species is discussed in Section 4.8 and summarized in Tables 4–4 and 4–5. The SAFE Report (see Section 4.3), produced annually, provides periodic updates to the information found in this FMP.~~

~~Many of the more productive HMS species support large and widespread international fisheries that are best managed cooperatively with other nations. In particular, rebuilding programs, required unilaterally by the Magnuson-Stevens Act for overfished stocks, would be ineffective without international cooperation, especially if domestic catches are only small fractions of the stock wide harvest (see Table 4–5 for West Coast catch fractions). For such species, regional remedial actions must be, to the extent practicable, concurrent with recommendations/resolutions adopted at international forums for cooperative action (see Section 4.5 on stock rebuilding), through the two Pacific tuna RFMOs.~~

~~Still other~~Some HMS species~~MUS, such as sharks,~~ possess life histories characterized by low productivity, thus supporting smaller fisheries that tend to be more regional than international. ~~They have more localized distributions and life stage needs, often within the EEZ.~~ Not only are they more easily overfished, but recovery takes longer, i.e., the species are less resilient to overfishing. Some of these species have a localized distribution and life stage needs, concentrated within the U.S. West Coast EEZ, thus supporting smaller fisheries that tend to be more regional than international. Their management should be more conservative, and may require more proactive and targeted regional leadership for species with localized distributions.

Managing conservatively means being precautionary, especially when there are large uncertainties in how a stock is being affected by fishing. Besides lowering the threshold for taking remedial action, it could mean preventing rapid growth of fisheries to prevent overshooting of management goals, or taking steps to protect the reproductive potential of stocks.

The goal of the Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act of 1996 and Magnuson-Stevens Conservation and Management Reauthorization Act of 2006, is to ensure the long-term sustainability of fisheries and fish stocks by halting or preventing overfishing and by rebuilding overfished stocks. The Act requires developing fishery management plans for exploited species of U.S. seas including shelf, anadromous, and highly migratory species whose ranges extend beyond the EEZ. By its National Standard 1, optimum yield is the ultimate goal for each fishery.

National Standard 1 Guidelines, as required by the Magnuson-Stevens Act and published in the Code of Federal Regulations (50 CFR 600.310) were developed to assist in implementing the Act. ~~The Guidelines state that the following items should be included in the FMP:~~

4.1 Reference Points Including MSY, OY, and Status Determination Criteria

Reference points are guideposts for managing exploited stocks based on stock biomass and the amount of catch (and thus fishing mortality) that is occurring. They are used to determine if overfishing is occurring or a stock is overfished. In either case control rules or other predetermined procedures are triggered to

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reduce fishing mortality. However, for most HMS MUS stock rebuilding will be ineffective without international cooperation. For such species, domestic regulations must be predicated on the relative impact of West Coast fisheries.

4.1.1 Reference Points Required for All Stocks

Section 303(a)(15) of the Magnuson-Stevens Act applies “unless otherwise provided for under an international agreement in which the United States participates” (P.L. 109-479 104(b)(1)). This exception applies to stocks or stock complexes subject to management under an international agreement, which is defined as “any bilateral or multilateral treaty, convention, or agreement which relates to fishing and to which the United States is a party” (see Magnuson-Stevens Act section 3(24)). Maximum sustainable yield, optimum yield and status determination criteria would still need to be specified for stocks subject to this exception.

Maximum sustainable yield (MSY): MSY is the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological, environmental conditions and fishery technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets. For management purposes MSY is usually expressed in terms of the following reference points:

MSY fishing mortality rate (F_{MSY}): The fishing mortality rate that, if applied over the long term, would result in MSY.

MSY stock size (B_{MSY}): The long-term average size of the stock or stock complex, measured in terms of spawning biomass or other appropriate measure of the stock’s reproductive potential that would be achieved by fishing at F_{MSY} .

Status determination criteria (SDC): ~~Quantifiable factors~~ are quantifiable thresholds (or their proxies) that are used to determine if overfishing has occurred, or if the stock or stock complex is overfished. “Overfished” relates to biomass of a stock or stock complex, and “overfishing” pertains to a rate or level of removal of fish from a stock or stock complex. SDC are:

Maximum fishing mortality threshold (MFMT): The level of fishing mortality (F), on an annual basis, above which overfishing is occurring. The MFMT or reasonable proxy may be expressed either as a single number (a fishing mortality rate or F value), or as a function of spawning biomass or other measure of reproductive potential.

Overfishing limit (OFL): The annual amount of catch that corresponds to the estimate of MFMT applied to a stock or stock complex’s abundance and is expressed in terms of numbers or weight of fish. The OFL is an estimate of the catch level above which overfishing is occurring.

Minimum stock size threshold (MSST): The level of biomass below which the stock or stock complex is considered to be overfished.

Optimum yield (OY): The amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems.

4.1.2 Reference Points Required for Stocks not Subject to the Exception under MSA Section 303(a)(15)

Acceptable biological catch (ABC): A level of a stock or stock complex’s annual catch that accounts for

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the scientific uncertainty in the estimate of OFL and any other scientific uncertainty, and should be specified based on the ABC control rule.

Annual catch limit (ACL): The level of annual catch of a stock or stock complex that serves as the basis for invoking accountability measures (AMs). ACL cannot exceed the ABC, but may be divided into sector-ACLs.

For domestically managed stocks an ABC control rule: A must be established. This control rule is a specified approach to setting the ABC for a stock or stock complex as a function of the scientific uncertainty in the estimate of OFL and any other scientific uncertainty (see paragraph (f)(4) of this section).

Annual catch limit (ACL): The level of annual catch of a stock or stock complex that serves as the basis for invoking AMs. National Standard 1 Guidelines provide an exception to the requirement to establish ABCs, ACLs, and AMs for stocks or stock complexes subject to management under an international agreement. By inference the above reference points would need to be established for stocks not subject to this international exception and are wholly managed domestically.

~~ACL cannot exceed the ABC, but may be divided into sector-ACLs.~~

~~Annual catch target (ACT): An amount of annual catch of a stock or stock complex that is the management target of the fishery, and accounts for management uncertainty in controlling the actual catch at or below the ACL. ACTs are recommended in the system of accountability measures so that ACL is not exceeded.~~

~~ACT control rule: A specified approach to setting the ACT for a stock or stock complex such that the risk of exceeding the ACL due to management uncertainty is at an acceptably low level.~~

~~This FMP adopts the default MSY (or MSY proxy) and OY control rules (Sections 4.1.1.4 and 4.1.2.1), but additionally uses an OY (instead of MSY) target for vulnerable species (Section 4.1.2.2). The default MSY control rule was chosen because it is the standard recommended in technical guidance for implementing National Standard 1 of the Magnuson-Stevens Act, and it is consistent with the WPRFMC's rule for pelagic fisheries. The vulnerable species OY control rule is applied to sharks because of their low productivity, and to bluefin tuna and striped marlin because of uncertainties concerning total catches and stock structures.~~

~~To be precautionary, at the time of FMP adoption the OY for vulnerable species was set at 0.75MSY (from the relationship shown in Figure 4-1). Any harvest guideline for vulnerable species is set equal to that OY.~~

~~The status of the MUS in this FMP is discussed in terms of this default control rule in the annual HMS SAFE document.~~

~~4.1.1 MSY, SDC, and Determining Overfishing and Overfished~~

~~4.1.1.1 4.2 MSY Maximum Sustainable Yield~~

Because MSY is a long-term average, it need not be estimated annually, but it must be based on the best scientific information available, and should be re-estimated as required by changes in long-term environmental or ecological conditions, fishery technological characteristics, or new scientific information.

As part of the biennial process (see Chapter 5) the HMSMT will review recent stock assessments or other information as described below and submit a draft SAFE document for review at the June Council meeting containing MSY estimates, noting if they are a change from the current value. The SSC will review these estimates and make a recommendation to the Council on their suitability for management. Based on this

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advise the Council may recommend a revision to a current MSY estimate to NMFS.

MSY is estimated based on the amount of information available about the stock. The following categories show the relationship between available information and the estimation of MSY:

Category 1, regularly assessed stocks: ~~A plausible~~ estimate of MSY (and other MSY-based reference points) may be determined from the assessment. In the event that the Council determines, based on advice from the SSC, that MSY estimates derived from an assessment are not suitable for management, the Council may recommend changes in the way that MSY is estimated in the assessment. Because HMS assessments are generally conducted by working groups outside of the Council process, such recommendations would be forwarded to the RFMO conducting or sponsoring the stock assessment through the U.S. delegation for consideration when conducting future assessments. In that event the Council could recommend to retain any current MSY estimate in the FMP or regulations, or propose an alternate estimate.

Category 2, unassessed stocks with catch history and additional information on relative abundance or stock productivity: The HMSMT compiles the best available stockwide catch data, or if not available, regional catch data and all additional information on a stock's productivity including relative abundance or catch/effort data if available. MSY or proxy estimates will be developed based on the catch time series and additional information. The relative impact of U.S. west coast fisheries may help to inform decisions on selecting appropriate reference points.

Category 3, unassessed stocks with catch history but lacking further information on relative stock abundance or productivity: The HMSMT compiles the best available stockwide catch data, or if not available, regional catch data. A catch-based method such as the Depletion Corrected Average Catch (DCAC), Depletion Based Stock Reduction Analysis (DB-SRA), or in the case of a relatively stable catch history without indications of stock depletion, an average of selected catch levels may be chosen to represent a proxy MSY.

~~4.1.1.2 MFMT and OFL~~

~~The MFMT mortality threshold is the ratio $F_{MFMT}/F_{MSY} = 1.0$; it is the mortality threshold for all stock levels above the MSST threshold (described below). It is illustrated schematically in Figure 4-1, where the x and y axes are in relative measure, the biomass and fishing mortality ratios B/B_{MSY} and F/F_{MSY} , respectively. With this MFMT ceiling emplaced, a stock would not be reduced to levels any lower than B_{MSY} that produces MSY (on average). It is to be noted, however, that the Technical Guidance for precautionary compliance with NS 1 allows that MFMT can be occasionally and temporarily exceeded at some level of probability that depends upon the variability of fishing mortality. MSY is specified as an absolute quantity, either in weight or number of fish. For management purposes the estimate of MSY by itself is less relevant than the reference points, F_{MSY} and B_{MSY} , that may be derived from it. However, for many HMS, a deterministic estimate of MSY may not be possible. In these cases proxy values for MSY-based reference points may be used. These MSY related reference points may be specified in various ways such as referenced to a stock depletion level (biomass relative to unfished biomass) or spawning potential ratio (the spawning potential per recruit referenced to the unfished level).~~

~~The OFL is the annual amount of catch that corresponds to the estimate of MFMT applied to a stock or stock complex's abundance and is expressed in terms of numbers or weight of fish. The OFL is an estimate of the catch level above which overfishing is occurring.~~

~~4.1.1.3 MSST~~

~~The MSST biomass threshold, the minimum biomass at which recovery measures are to begin, is the ratio~~

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~~B_{MSST}/B_{MSY} . It specifies a lower biomass level that allows remedial action not to be triggered each time B drops below B_{MSY} , simply from natural variation. In terms of B_{MSY} , the recommended level of B_{MSST} is:~~

~~$B_{MSST} = (1 - M)B_{MSY}$ when M (natural mortality) ≤ 0.5 , and~~

~~$B_{MSST} = 0.5B_{MSY}$ when $M > 0.5$~~

~~(i.e., whichever is greater). B_{MSST} must not be less than $B_{MIN} = 0.5B_{MSY}$ and should allow recovery back to B_{MSY} within 10 years when F is reduced to zero (to the extent possible).~~

4.1.1.4 MSY Control Rule

~~The **MSY control rule** specifies how a fishery is to be managed depending upon stock status relative to the SDCs. By control rule definition, **overfishing** occurs when fishing mortality F is greater than the MFMT mortality. Similarly, a stock is **overfished** when its size falls below the MSST stock biomass. MSA Section 304(e) and 304(i) describe required responses when a stock is subject to overfishing, approaching the overfished condition (i.e., if there is overfishing and the stock is expected to be overfished within two years) and when it is overfished. Fishery managers must then take appropriate remedial action in relation to the applicability of Sections 304(e) and 304(i). If Section 304(e) applies, in the case of approach to being overfished, action must be taken to prevent overfishing; if overfishing is occurring, harvest rates must be reduced below MFMT; in the case of being overfished, a rebuilding plan must be prepared within one year to rebuild the stock. The rebuilding plan must bring the stock back to the level producing maximum (or optimal) sustainable yield within a specified time period. If the Secretary determines overfishing is due to excessive international fishing pressure pursuant to Section 304(i) a different response is called for. The Council then develops recommendations for domestic regulations to address the relative impact of U.S. vessels and recommendations for international actions to end overfishing and rebuild affected stocks. The Guidelines call for precautionary management, i.e., use of conservative control rules with remedial action to begin even if the overfishing/overfished status cannot be established with certainty.~~

4.1.1.4 Determining if Overfishing is Occurring or a Stock is Overfished

~~The Council will monitor each managed HMS stock and determine annually, if possible, if overfishing is occurring and whether the stock is overfished. Overfishing is occurring if the fishing mortality rate exceeds MFMT or catch exceeds the OFL for 1 year or more.~~

~~The MSST or a reasonable proxy must be expressed in terms of spawning biomass or other reproductive potential. Should the estimated size of an HMS stock in a given year fall below this threshold, the stock is considered overfished.~~

4.1.2 4.3 Optimum Yield

OY is defined as MSY reduced by relevant socioeconomic factors, ecological considerations, and fishery-biological constraints so as to provide the greatest long-term benefits to the Nation. Therefore, OY cannot be set greater than MSY, and must take into account the need to prevent overfishing and rebuild overfished HMS stocks. To the extent possible, the relevant social, economic, and ecological factors used to establish OY for an HMS stock or fishery should be quantified and reviewed in historical, short-term, and long-term contexts. National Standard 1 Guidelines includes examples of factors that may be considered when determining OY. Normally, OY should not be greater than the ABC or ACL, if identified (see below). However, since OY is a long-term average and ABCs and ACLs are set annually there may be instances where the ABC or ACL could exceed the OY on a short-term basis. ~~The OY specifications in Table 4-3~~The OYs specified when this FMP was approved shall remain in effect until changed by recommendation of the Council, after considering recommendations of the SSC, and approval by NMFS. ~~The OY for any If~~

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the Council incorporates a new management unit species ~~not listed in Table 4-3~~ into the FMP the OY shall be determined preferably concurrently ~~with addition to the management unit,~~ or as soon as possible thereafter by recommendation of the Council, after considering input by the SSC, HMSMT, HMSMT, and approval by NMFS. OY specifications will be reported in the HMS SAFE.

~~4.1.2.1 Default OY Control Rule for Species Not Considered Vulnerable~~

~~As a default control rule, $OY(proxy) = equals MSY$ or $MSY(proxy)$ is used for species not considered vulnerable.~~

~~Alternatively, OY may be reduced from MSY based on the range of considerations described in National Standard 1 Guidelines and using various methods. For example, a precautionary default value of OY may be defined in terms of fishing mortality as $0.75MFMT$. Simulation studies have indicated that management according to the OY default value will often allow biomasses (B_{OY}) to be maintained at about $1.25B_{MSY}$, with yields of about 95% of MSY. This alternative default calculation is shown in Figure 4-1 (based on Restrepo et al. 1998). A **Minimum Biomass Flag** (B_{FLAG}) may be identified equal to $(1-M)B_{OY}$ or $0.5B_{OY}$ (whichever is greater) (Boggs et al. 2000). B_{FLAG} , which would then be equivalent to $1.25(B_{MSST}/B_{MSY})$, serves as a warning call to halt biomass reduction that would jeopardize obtaining OY on average.~~

~~These control rules involve the concept of target and limit reference points. It can be seen that B_{MSY} and B_{OY} are target reference points for the long-term management goals of MSY or OY. But B_{MSST} and B_{FLAG} are limit thresholds for the respective control rules that should not be exceeded, or exceeded only at some level of probability. A stock that is reduced below those biomass limits would normally require remedial action, because the target goals would then be jeopardized. Similarly, F_{OY} is a target reference point. However, F_{MSY} could be a target reference point or a limit threshold; it could be the target point for the MSY control rule or it could be the limit threshold for the OY control rule. If $B < B_{FLAG}$ is expected with the latter rule, remedial action may be recommended even though the stock could still be far above B_{MSST} .~~

~~4.1.2.2 Alternative OY Control Rule for Vulnerable Species~~

Although required, specifying OY for internationally managed stocks is problematic, because achieving OY is intended to produce the greatest benefit to the Nation and prevent overfishing. For most of the HMS FMP MUS stocks fisheries managed under this FMP catch a very small proportion (in some cases less than one percent) of stock-wide catch. Therefore, for internationally-managed stocks, the Council may consider fishing levels that are agreed upon by the U.S. at the international level when specifying OY.

A stock's vulnerability should be a key consideration in specifying OY. Vulnerability is a combination of ~~its~~ a stock's productivity, which depends upon its life history characteristics, and its susceptibility to the fishery. Productivity refers to the capacity of the stock to produce MSY and to recover if the population is depleted, and susceptibility is the potential for the stock to be impacted by the fishery, ~~which includes direct captures, as well as indirect impacts to the fishery (e.g., loss of habitat quality).~~ In consultation with the SSC, the HMSMT may analyze the vulnerability of HMS stocks from time to time.

When specifying OY the Council may consider a reduction from the estimate of MSY based on stock vulnerability along with the other factors discussed above. A 25% reduction could be considered as a starting point for specifying OY based on vulnerability. For stocks not subject to the exception under MSA Section 303(a)(15) the procedures for specifying the ABC and ACL should be taken into account so that on average the ABC does not exceed OY.

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~~4.2~~ 4.4 Assessment of Stock Status

National Standard 2 requires using the best scientific information in managing management unit species. This requires periodic updating of stock status for comparing against status determination criteria. Stock status will be reported in Stock Assessment and Fishery Evaluation (SAFE) reports (Section 4.6). In the case of species under international management, the Council should recommend adopted SDCs as limit reference points to be considered by the appropriate RFMO (see also Section 2.1).

The methods for determining SDCs (described below) imply an ability to determine the level of biomass relative to its unfished level (B_0) and (at least conceptually) relative to B_{MSY} , and to determine the level of mortality (F) relative to some target level like F_{MSY} . This may be possible only for Category I stocks. For Category II stocks relative biomass level could be estimated by the decline in catch rate (CPUE) or, with sufficient information on stock and recruitment, by percent spawning potential ratio (SPR), or proxies based on SPR, e.g., $B_{50\%}$ or $F_{50\%}$. For Category III stocks MSY or OY estimates based on catch history alone may be the only information available for management, and the F/F_{MSY} and B/B_{MSY} ratios must be derived from those estimates. In these cases, it may be necessary to use proxy values based on average stock-wide catch over an appropriate time period. F_{MSY} and B_{MSY} proxies can be scaled as fractions of B_0 or multiples of M , respectively, e.g., $B_{MSY}=0.5B_0$ or $F_{MSY}=1.0M$.

Both MSY and OY refer to a species' sustainable catch, stock-wide. For some species there is no stock-wide catch information, and some (e.g., mako shark, dorado) occur within the management area as the edges of wider distributions, so even their maximum, regional catch levels are unlikely to reflect stock production. While stock-wide MSY is unknown for those species, the local catches can be used to estimate a local or regional MSY.

4.4.1 Status Determination Criteria

The Council will monitor each managed HMS stock and determine annually, if possible, if overfishing is occurring and whether the stock is overfished, against status determination criteria (MFMT and MSST). The Secretary will use the following status determination criteria to identify stocks subject to overfishing or that have become overfished as specified at MSA section 304(e).

MFMT equals F_{MSY} . The **OFL** is the annual amount of catch that corresponds to the estimate of MFMT applied to a stock or stock complex's abundance and is expressed in terms of numbers or weight of fish. The OFL is an estimate of the catch level above which overfishing is occurring.

MSST is calculated as the greater of:

$B_{MSST} = (1-M)B_{MSY}$ when M (natural mortality) ≤ 0.5 , or

$B_{MSST} = 0.5B_{MSY}$ when $M > 0.5$

MSST or a reasonable proxy must be expressed in terms of spawning biomass or other reproductive potential. Should the estimated size of an HMS stock in a given year fall below this threshold, the stock is considered overfished.

Overfishing occurs when fishing mortality F is greater than the MFMT mortality or catch exceeds OFL for one year or more. Similarly, a stock is **overfished** when its size falls below the MSST stock biomass. MSA Section 304~~€~~ and 304(i) describe required responses when a stock is subject to overfishing, approaching the overfished condition (i.e., if there is overfishing and the stock is expected to be overfished within two years) and when it is overfished. ~~Since the management unit species vary from vulnerable to very productive an alternative OY specification may be considered for vulnerable species.~~

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Vulnerability of species can stem from many reasons, and any species that has been depleted to 50% below B_{MSY} (for the logistic production model, to 25% of unfished level B_0) that is incapable of recovering back to that B_{MSY} level within 10 years (with fishing removed) is to be considered vulnerable in this FMP. The productivities (potential per capita rates of population increase r) of such species would have to be 5% or less per year, assuming recovery time is determined by a linear compensatory increase in r with population decline (logistic model). Only the sharks among the MUS, including common thresher, are likely to have such low rates and long recovery times (see Table 4-1), and they are therefore considered vulnerable by this criterion. Vulnerable Oys are also appropriate for other fish species for other reasons of stock health concern (see bluefin tuna, Section 4.8.1, and striped marlin, Section 4.8.3).

In this FMP, where OY is not determined analytically, an OY or OY proxy may be defined according to vulnerability, starting with consideration of a value of $0.75 \times (MSY \text{ or } MSY(\text{proxy}))$.

The rationale for using this approach to set the OY for vulnerable species follows from the recommended $F_{OY} = 0.75F_{MSY}$ (see Figure 4-1). Then since $MSY = F_{MSY}B_{MSY}$, $OY = 0.75F_{MSY}B_{MSY} = 0.75MSY$ when estimated from the same B_{MSY} biomass. Starting from this consideration of an alternative OY specification, the Council may take into account other factors relating to the stock's vulnerability (biological productivity and susceptibility to fisheries) in determining an appropriate OY for the stock. Likewise, the OY control rule can be adjusted for more vulnerable species. The more vulnerable a species is to being overfished, the more conservative should management be. And since the maximum value of OY is MSY, then the more should the catch ratio OY/MSY be reduced from unity (while B_{OY}/B_{MSY} is increased from unity).

Since the default alternative rule is defined with MFMT and MSST as ratios relative to MSY (as in Figure 4-1), its resulting generality allows management according to specific criteria even without estimates of the absolute biomass or exploitation status of a stock. This allows all the MUS, diverse with respect to productivity, scientific understanding, and stock status, to be managed by the same rule and in accordance with the requirements of the Magnuson-Stevens Act. This control rule is the most straight forward of the possible rules discussed by Restrepo et al. (1998) and is the one they recommend. The reduction in fishing mortality it calls for to rebuild depleted populations is intermediate with respect to the degree of depletion that can be remedied at acceptable rates of recovery.

~~ABC, ACLs, ACTs, and Accountability Measures~~

~~According to the National Standard 1 Guidelines an ABC and a related ACL must be set for stocks managed under an FMP. However, the Guidelines include an exception to this requirement for stocks subject to management under an international agreement, which is defined as “any bilateral or multilateral treaty, convention, or agreement which relates to fishing and to which the United States is a party” (50 CFR 600.310(h)(2)(ii)). The Council has determined that all the managed stocks in this FMP meet this criterion. Therefore, the Council will not normally set ABCs and ACLs for managed HMS stocks. However, application of this exception does not preclude the Council from setting an ACL (and identifying an associated ABC to facilitate setting the ACL) if circumstances warrant.~~

~~The ABC is a level of a stock's annual catch that accounts for scientific uncertainty in the estimate of OFL and any other scientific uncertainty. The ABC may not exceed the OFL. The HMSMT will develop ABC control rules for those managed stocks for which they are required. The ABC control rule will be reviewed by the Council's SSC. Based on that review the Council will adopt the ABC control rule judged suitable by the SSC. Through this process the ABC control rule may be revised from time to time based on the best scientific information available. The ABC will be expressed in terms of catch, or landings if the ABC control rule incorporates an estimate of bycatch or other sources of fishing mortality.~~

~~The Council will establish ACLs for those managed stocks for which they are required. ACTs and ACT~~

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~~control rules may be established if they would help ensure the ACL is not exceeded. The ACL may not exceed the ABC. ACLs will be established for each year in the biennial management cycle (see Chapter 5). ACLs are established, reviewed, and may be adjusted as part of the periodic management cycle described in Section 5.2. No “sector ACLs” are identified (see 50 CFR 660.310(f)(5)(ii)) in this FMP, but may be established as part of the biennial management process.~~

~~The biennial management process will be used to implement accountability measures (Ams) should they be required. Ams are management controls to prevent ACLs from being exceeded and to correct or mitigate overages of the ACL if they occur.~~

~~Annually, the HMSMT will gather the requisite information needed to determine whether an ACL has been exceeded as soon as possible after the end of the fishing year (March 31). If catch exceeds the ACL more than once in the last four years, the system of ACLs and Ams will be reevaluated and modified if necessary. For the purposes of this evaluation a 3-year moving average or other multi-year approach may be used, if there are insufficient data to conduct the evaluation based on a single year’s catch.~~

If Section 304(e) applies and overfishing is occurring, harvest rates in fisheries managed under this FMP must be reduced below the MFMT. This would be especially urgent when a stock is approaching an overfished condition. If the stock is overfished, a rebuilding plan must be prepared within one year to rebuild the stock. The rebuilding plan must bring the stock back to the level producing MSY within a specified time period.

4.1.5—4.4.2 Council Response to Overfishing

~~If a stock~~The Secretary will immediately notify the Council when a stock or stock complex is subject to overfishing, approaching being overfished, or overfished—fishery managers. The Council must then take appropriate remedial action— in relation to the applicability of Sections 304(e) and 304(i).

4.1.5.1—4.4.2.1 International Overfishing

If the Secretary determines that a stock is overfished or approaching the condition of being overfished due to excess international fishing pressure, and for which there are no measures (or no effective measures) to end overfishing under an international agreement to which the United States is a party, then the Council will respond according to the procedures described in Section 304(i) of the MSA ~~(and 50 CFR 600.310(k)).~~ This section requires the Council make recommendations for domestic regulations to address the relative impact of U.S. vessels and recommendations for international actions to end overfishing and rebuild affected stocks.

Section 304(i)(2) states that the “appropriate council” shall develop recommendations for domestic measures and international actions to end overfishing. The Pacific Council may notify NMFS for which HMS stocks it considers itself the appropriate council. NMFS may use this information when deciding whether the Pacific Council is obligated to develop recommendations pursuant to Section 304(i)(2). The Council also may use this assessment of appropriateness to prioritize the stocks for which it will identify management reference points. Any determination that this FMP is the primary FMP for any particular HMS MUS stock should also be taken into account (see Section 3.2). While catches by fisheries managed under this FMP would be the main factor in deciding whether it is the “appropriate council,” the Council may wish to reserve the right to develop recommendations for international actions for stocks that such fisheries are only modestly engaged in (e.g., South Pacific albacore).

On December 15, 2004, NMFS notified the Council that overfishing was occurring Pacific-wide on bigeye tuna and requested the Council to take appropriate action. Because this notification occurred before the

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2007 MSA reauthorization, when Section 304(i) was added, the Council incorporated rebuilding measures into this chapter of the FMP, pursuant to MSA Section 304I, by FMP Amendment 1. Given the subsequent implementation of the requirements in Section 304(i), this material was moved to an appendix under Amendment 4.

4.1.5.24.4.2.2 Rebuilding Stocks When International Fishing Pressure is not the Cause

Rebuilding of overfished stocks is a unilateral requirement by the Magnuson-Stevens Act, but, as already noted, internationally fished stocks require cooperative catch reductions among the fishing nations for this rebuilding to be effective. U.S. responsibility for rebuilding is greater for stocks not subject to MSA Section 304(i) and the requirements at Section 304(e) apply.

~~When stock size B falls below its MSST level, F must be reduced below its fishing mortality threshold must be reduced sufficiently to allow stock rebuilding at least back to B_{MSY} . The amount of mortality reduction would depend upon the severity of~~ by a target rebuilding year, which is identified in a rebuilding plan adopted by the Council. ACLs are then set accordingly until the stock depletion below MSST, the stock's capacity to rebound, and the desired recovery time of the stock. In rebuilding according to the default MSY control rule Figure 4-1), F is reduced linearly by the amount that B is determined to be below MSST. After the stock has been is rebuilt back to MSST, maintaining F at the MFMT level will allow the stock to continue its increase until at equilibrium at to B_{MSY} . With the OY Control Rule, the decrease from F_{OY} is shown beginning at B_{MSY} , rather than at B_{FLAG} , to enable faster rebuilding back to B_{OY} .

Under NMFS's National Standard Guidelines, a number of factors enter into the specification of the time period for rebuilding. The lower limit of the specified time period for rebuilding is determined by the status and biology of the stock or stock complex and its interactions with other components of the marine ecosystem, and is defined as the amount of time that would be required for rebuilding if fishing mortality were eliminated entirely. If the lower limit is less than 10 years, then the specified time period for rebuilding may be adjusted upward to the extent warranted by the needs of fishing communities and recommendations by international organizations in which the United States participates, except that no such upward adjustment can result in the specified time period exceeding 10 years, unless management measures under an international agreement in which the United States participates dictate otherwise. If the lower limit is 10 years or greater, then the specified time period for rebuilding may be adjusted upward to the extent warranted by the needs of fishing communities and recommendations by international organizations in which the United States participates, except that no such upward adjustment can exceed the rebuilding period calculated in the absence of fishing mortality plus one mean generation time or equivalent period based on the species' life-history characteristics. Overfishing restrictions and recovery benefits must also be fair and equitable among fishery sectors. Rebuilding of internationally managed fisheries must reflect traditional U.S. participation in those fisheries relative to that of other nations.

~~Fishery management councils actually have considerable latitude in how they rebuild depleted stocks. The rebuilding rules illustrated in Figure 4-1 and also Figures 4-2 and 4-3 (the F ramps) are examples of just some of the possible approaches to F reduction. Actual rebuilding could proceed through a combination of ways, e.g. a series of stepped increases in F or series of increasing catch quotas as the biomass rebuilds back toward B_{MSY} (such quotas can be shown only indirectly in terms of the F and B dimensions of Figure 4-1).~~

~~Rebuilding of overfished stocks is a unilateral requirement by the Magnuson-Stevens Act, but, as already noted, internationally fished stocks require cooperative catch reductions among the fishing nations for this rebuilding to be effective. U.S. responsibility in the rebuilding, however, will be greater the more localized the stock and the greater the domestic take of the stock's production (see unilateral/international management, Section 2.2).~~

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In general, rebuilding is to remedy stock depletion, but there can also be rebuilding to remedy **local depletion**. The latter rebuilding could be domestic and unilateral. Local depletion occurs when localized catches are in excess of replacement from local and external (via net immigration) sources of production. As such, it can occur independently of the status of the overall stock. The local depletion of abundance can be stronger than the concurrent stock-wide decrease (Squire and Au 1990). In all cases, the degree and extent of this depletion must be assessed relative to the health of the overall stock and the resiliency of the species.

4.2—4.5 Management of Stocks not Subject to the Exception under MSA Section 303(a)(15)

4.1.44.5.1 ABC, ACLs, ACTs, and Accountability Measures

According to the National Standard 1 Guidelines an ABC and a related ACL must be set for stocks managed under an FMP. However, the Guidelines include an exception to this requirement for stocks subject to management under an international agreement, which is defined as “any bilateral or multilateral treaty, convention, or agreement which relates to fishing and to which the United States is a party.” The Council will not normally set ABCs and ACLs for HMS MUS stocks the Council has determined meet this criterion. However, application of this exception does not preclude the Council from setting an ACL (and identifying an associated ABC to facilitate setting the ACL) if circumstances warrant.

The ABC is a level of a stock’s annual catch that accounts for scientific uncertainty in the estimate of OFL and any other scientific uncertainty. The ABC may not exceed the OFL. The HMSMT will develop ABC control rules for those managed stocks for which they are required. The ABC control rule will be reviewed by the Council’s SSC. Based on that review the Council will adopt the ABC control rule judged suitable by the SSC. Through this process the ABC control rule may be revised from time to time based on the best scientific information available. The ABC will be expressed in terms of catch, or landings if the ABC control rule incorporates an estimate of bycatch or other sources of fishing mortality.

The Council will establish ACLs for those managed stocks for which they are required.

The ACL may not exceed the ABC. ACLs will be established for each year in the biennial management cycle (see Chapter 5). ACLs are established, reviewed, and may be adjusted as part of this management cycle described. ACLs may be subdivided as part of the biennial management process. This includes establishing separate sector-ACLs and for stocks or stock complexes that have harvest in state waters, dividing the overall ACL between a Federal-ACL and a state-ACL.

The biennial management process will be used to implement accountability measures (AMs) should they be required. AMs are management controls to prevent ACLs from being exceeded and to correct or mitigate overages of the ACL if they occur. AMs include annual catch targets (ACTs) and ACT control rules, which the Council also may establish if they would help ensure the ACL is not exceeded. An ACT is an amount of annual catch of a stock or stock complex that is the management target of the fishery, and accounts for management uncertainty in controlling the actual catch at or below the ACL. The ACT control rule is a specified approach to setting the ACT for a stock or stock complex such that the risk of exceeding the ACL due to management uncertainty is at an acceptably low level.

Annually, the HMSMT will gather the requisite information needed to determine whether an ACL has been exceeded as soon as possible after the end of the fishing year (March 31). If catch exceeds the ACL more than once in the last four years, the system of ACLs and AMs will be reevaluated and modified if necessary. For the purposes of this evaluation a 3-year moving average or other multi-year approach may be used, if there are insufficient data to conduct the evaluation based on a single year’s catch.

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4.5.2 Precautionary Management for Stocks above the MSST but below B_{MSY} or its Proxy

Fishery management councils have considerable latitude in how they rebuild stocks depleted below B_{MSY} but not overfished. To rebuild stock biomass to B_{MSY} a precautionary reduction from the ABC to the ACL should be considered. The reduction would be scaled to stock depletion in reference to the B_{MSY} target. This can take a linear form, so that the reduction from the ABC increases in proportion to the decline in biomass.³ Other forms can be considered such as a series of stepped constant ACLs for different ranges of B_{MSY} values.

~~4.1 Assessment of Stock Status~~

~~National Standard 2 requires using the best scientific information in managing management unit species. This requires periodic updating of stock status for comparing against their control rules. Status updating will be through Stock Assessment and Fishery Evaluation (SAFE) reports (Section 4.3). In the case of species under international management, the control rule approach must be promoted so that status in terms of SDCs (e.g., F/F_{MSY} , B/B_{MSY}) can be described (see also Section 2.1).~~

~~The control rule approach implies an ability to determine the level of biomass B relative to its initial level B_0 and (at least conceptually) relative to B_{MSY} , and to determine the level of mortality F relative to some target level like F_{MSY} . Relative biomass level could be estimated by the decline in catch rate (CPUE) or, with sufficient information on stock and recruitment, by percent spawning potential ratio (SPR), or proxies based on SPR, e.g., $B_{50\%}$ or $F_{50\%}$. Non-empirical MSY levels of B or F can be estimated as fractions of B_0 or multiples of M , respectively, e.g., $B_{MSY}=0.5B_0$ or $F_{MSY}=1.0M$.~~

~~In many cases estimates of MSY or OY themselves are the only information available for management, and the F/F_{MSY} and B/B_{MSY} ratios must be derived from those estimates. This does not abrogate the control rule, because MSY and OY are the management goals. Where MSYs have not been determined, average stock-wide catch levels over appropriate time periods can be proxies.~~

~~Both MSY and OY refer to a species' sustainable catch, stock-wide. For some species there is no stock-wide catch information, and some (e.g., mako shark, dorado) occur within the management area as the edges of wider distributions, so even their maximum, regional catch levels are unlikely to reflect stock production. While MSYs remain unknown for those species, the local catches can be used to estimate a local or regional level of MSY.~~

~~4.3~~ 4.6 Stock Assessment and Fishery Evaluation Report

The SAFE report is a document or set of documents that provides the Council with a summary of information concerning the most recent biological condition of stocks and the marine ecosystems in the management unit and the social and economic condition of the recreational and commercial fishing interests, fishing communities, and the fish processing industries. It summarizes, on a periodic basis, the best available scientific information concerning the past, present, and possible future condition of the stocks, marine ecosystems, and fisheries being managed under federal regulation.

~~National Standard 2 of the Magnuson-Stevens Act requires that the best scientific information available be used in developing FMPs and implementing regulations. For HMS, except dorado and sharks, NMFS and the Pacific Council rely on analyses and assessments adopted by various international bodies (of which~~

³ As an example, the Council's Pacific Coast Groundfish FMP identifies a "40-10" precautionary reduction predicated on an MSY proxy for roundfish of $B_{40\%}$. The linear reduction is scaled so that F or catch would be zero when stock size reaches 10% of its unfished size. Practically, however, catches would be managed under a rebuilding plan when the stock biomass falls below the MSST, which for roundfish is $B_{25\%}$.

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~~U.S. is an active participant), such as the Inter-American Tropical Tuna Commission (IATTC), International Scientific Committee for Tuna and Tuna-like Species in the North Pacific (ISC), Standing Committee on Tuna and Billfish (SCTB) and others. For other species such as dorado and sharks, the HMS Management Team and NMFS develops stock and fishery assessments, provides peer reviews and presents the results to the Council. The guidelines for implementation of NS 2 require preparation of an annual Stock Assessment and Fishery Evaluation (SAFE) report. The SAFE report will largely rely on international body assessments, NMFS directed assessments, and any new fishery information. The NS 2 guidelines for a SAFE report, adapted for this FMP, are below.~~

~~The SAFE report is a document or set of documents that provides the Council with a summary of information concerning the most recent biological condition of stocks and the marine ecosystems in the management unit and the social and economic condition of the recreational and commercial fishing interests, fishing communities, and the fish processing industries. It summarizes, on a periodic basis, the best available scientific information concerning the past, present, and possible future condition of the stocks, marine ecosystems, and fisheries being managed under federal regulation.~~

The Secretary of Commerce has the responsibility to assure that a SAFE report or similar document is prepared, reviewed annually, and changed as necessary. The Secretary or Council may utilize any combination of talent from Council, state, Federal, university, or other sources to acquire and analyze data and produce the SAFE report.

The SAFE report provides information to the Council and ~~Southwest~~**NMFS West Coast** Region ~~of NMFS~~ for determining annual harvest levels from each stock; documenting significant trends or changes in the resource, marine ecosystems, and fishery over time; and assessing the relative success of existing state and Federal fishery management programs. Information on bycatch and safety for each fishery should also be summarized. In addition, the SAFE report may be used to update or expand previous environmental and regulatory impact documents, and ecosystem and habitat descriptions.

National Standard 2 of the Magnuson-Stevens Act requires that the best scientific information available be used in developing FMPs and implementing regulations. For HMS, except dorado and sharks, NMFS and the Pacific Council rely on analyses and assessments adopted by various international bodies (of which U.S. is an active participant), such as the Inter-American Tropical Tuna Commission (IATTC), International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), and Western and Central Pacific Fisheries Commission (WCPFC). For other species such as dorado and sharks, the HMS Management Team and NMFS develops stock and fishery assessments, provides peer reviews and presents the results to the Council. The guidelines for implementation of National Standard 2 require preparation of an annual SAFE report. The SAFE report will largely rely on international body assessments, NMFS directed assessments, and any new fishery information. The National Standard 2 guidelines for a SAFE report, adapted for this FMP, are below.

Each SAFE report ~~must be scientifically based, and cite data sources and interpretations.~~

~~Each SAFE report should contain information on which to base harvest specifications, including ABCs, ACLs, and ACTs, if appropriate.~~

- ~~Each SAFE report should contain~~Must be scientifically based, and cite data sources and interpretations.
- Report any changes to numerical estimates of MSY and OY adopted by the Council as a threshold estimator recommendation to NMFS as part of the biennial process described in Chapter 5.

Report estimates of the MFMT ~~or~~ OFL, and MSST for each stock or stock complex, along with information

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by which the ~~Council~~Secretary may determine:

- ~~Whether overfishing is occurring with respect to any stock or stock complex; if any stock or stock complex is overfished; if the rate or level of fishing mortality applied to any stock or stock complex is approaching the maximum fishing mortality threshold;~~ and if the size of any stock or stock complex is approaching the minimum stock size threshold.
- ~~Any~~Should contain information on which to base harvest specifications, including ABCs, ACLs, and ACTs, if appropriate.
- ~~May contain recommendations to the Council on matters concerning bycatch and incidental catch.~~
- May describe those management measures necessary to ~~provide for rebuilding~~rebuild an overfished stock or stock complex ~~(if any)~~ to a level consistent with producing the ~~maximum sustainable yield~~ MSY in such fishery.

~~The SAFE will also report any changes to numerical estimates of MSY and OY adopted by the Council as a recommendation to NMFS as part of the biennial process described in Chapter 5.~~

- ~~Each SAFE report may~~May contain additional economic, social, community, essential fish habitat, and ecological information pertinent to the success of management or the achievement of objectives of each FMP.

Periodically, to align with the preparation of the Council's inventory of research and data needs prepared by the Scientific and Statistical Committee, the SAFE will contain research and data need recommendations.

Each year, in June and September, the HMS Management Team will deliver one combined SAFE report for all species in this FMP to the Council. The SAFE report will follow the guidelines specified in ~~NS~~National Standard 2 and will be used by the Council and NMFS to develop and evaluate regulatory adjustments under the framework procedure or the FMP amendment process. This information will provide the basis for determining annual harvest levels from each stock, documenting significant trends or changes in the resource, the bycatch, and the fishery over time, and assessing the relative success of existing state and federal fishery management programs. In addition, the SAFE report ~~will~~can be used to update or expand previous environmental and regulatory impact documents, and ecosystem and habitat descriptions, including EFH. ~~The SAFE report will also make recommendations to the Council on matters concerning bycatch and incidental catch.~~

~~4.4 — Status of Management Unit Stocks at the Time of FMP Adoption~~

~~The health status of management unit stocks is determined mainly by use of standard stock assessment techniques found in the scientific literature, but also from examination of their fisheries. The conclusions, summarized in Tables 4–2 and 4–3, should be reasonably accurate, but should also to be taken with caution. Assessments of stock status always involve assumptions, use of uncertain parameters, and particular interpretations of fishery statistics. There are no universally accepted standards by which to determine confidence for particular assessments, and “ground truthing” will probably never be possible for HMS species. Confidence arises mainly from long management experience with ample perspective from long time series of the fishery trends.~~

~~Management will involve comparing a stock's recent catch levels against its target reference levels, in most cases, MSY. These catch guideposts are listed in Table 4–2. For some stocks or populations, a **harvest guideline** is also listed. A harvest guideline if surpassed, calls for review of the stock/population and its fishery. The purpose is to alert the Council to the possibility that catches under its jurisdiction are at or near a particular target level.~~

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Basic life history characteristics and other important stock indicators for HMS MUS are provided in (Table 4-1) for a comparative overview of the spectrum of productivities, exploitation limitations, and recovery capabilities of those species. The productivity estimate r , the potential, fractional rate of population growth, is central, and is calculated as the rate at which a population, initially at equilibrium with some total mortality, could rebound if the fishing mortality were removed (Smith et al. 1998). These productivities are comparable among species and approximately the productivity at MSY, because for each the total mortality used in the calculation is the same multiple of natural mortality (M) that produces MSY (approximately). The procedure thus standardizes productivity estimates of all the species to that at B_{MSY} . Accuracy depends mainly upon the precision of the age at maturity estimate, which is the parameter that drives r (Smith et al. 1998). Uncertainty in r is greater for high productivity species (but they are more accurately aged as they are short lived), and less for low productivity species (their productivities are less sensitive to age at maturity). The derived statistics of maximum rate of population growth and doubling time are standardized similarly, by assuming a same production function—for simplicity, the logistic model. In Table 4-1 age at maturity, fecundity, M , and maximum age are given for each species, from which are estimated productivity r (at B_{MSY}), maximum annual fractional Population Growth Rate (PGR_{MAX}) (which exploitation should not exceed to prevent population collapse), and the time needed (T_D) for a population to double (recover) after being depleted to $0.5B_{MSY}$ (see Table 4-1 footnotes for details). The productivity parameter r affects growth rate exponentially, so moderate changes in its value have large effects, as reflected in the PGR_{MAX} and T_D statistics. The statistics indicate that the billfishes and tunas (each as populations in their entirety), with $r > 0.10$, can withstand $> 20\%$ exploitation rates (PGR_{MAX} rates) and can recover from depletion within 6 years, while the sharks (similarly considered), with $r < 0.07$, can withstand no more than 12% exploitation (on average), and their recovery time is 1-2 decades, or more.

The status of management unit species at the time of the adoption of the FMP (2003) is described in Appendix B. Annual SAFE documents provide regular updates on the status of stocks.

4.5—Measures Adopted by the Council to End of Overfishing and Rebuild Overfished Stocks

No MUS are currently overfished. The Council strategy to end overfishing on bigeye tuna is described below.

4.5.1—Bigeye Tuna

Both the Pacific and Western Pacific Fishery Management Councils were notified by letter from NMFS dated December 15, 2004, that the Secretary of Commerce had determined that overfishing of bigeye tuna was occurring Pacific wide. In response, the Council has articulated a strategy to address overfishing of bigeye tuna in the EPO. Together with action taken by the WPFMC, it is intended to end overfishing of bigeye tuna Pacific wide. The specific actions to actually end overfishing would have to be developed by multilateral cooperation through appropriate regional fishery management organizations (RFMOs), and, as necessary, domestic regulation. The elements of the Council's strategy are described below.

As part of its strategy the Council recognizes that restrictions applied to a single fishery would be insufficient to curtail fishing mortality to a level not exceeding average MSY (AMSY). Therefore, restrictions on both longline and purse seine fisheries are necessary to end overfishing.

4.5.1.1—Management Objectives and Measures to Immediately End Overfishing

The Council will transmit recommendations for immediate specified reductions in fishing mortality to NMFS, the Department of State, and the U.S. delegations to Pacific tuna RFMOs. With regard to bigeye tuna in the EPO, the Council will work with the General Advisory Committee, established under the Tuna Conventions Act, and the U.S. Section to the Inter American Tropical Tuna Commission (IATTC) to

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~~establish management goals to guide any necessary reductions in fishery-specific catch/effort in the EPO. To the extent practicable, these goals will be consistent with IATTC staff recommendations.~~

~~Based on stock assessments in 2005 and 2006, fishing mortality on Pacific bigeye in the EPO by longline vessels must be reduced by 30 percent and purse fishing vessel mortality by 38 percent as compared to 2003-04 fishing levels. In the WCPO, fishing mortality on Pacific bigeye by longlines and purse seines must be reduced by 20 percent from 2001-03 levels for each gear type. Any specific fishery management measure adopted by the IATTC or the WCPFC should reflect traditional participation in fisheries. In coordination with the WPFMC these measures are cumulative across the two regions (EPO and WCPO) since although Pacific bigeye tuna is thought to be a single population, it is managed in two segments, fished by different fisheries and managed by two separate RFMOs. Specific catch/effort management goals may be revised over time to be consistent with changes in stock status. The following general principals should be adhered to when proposing management measures intended to meet these goals:~~

- ~~1. Use science-based measures that consider historical participation, and provide for sustained participation by local communities.~~
- ~~2. Strive for consistent measures (e.g., between the WCPO and EPO) where possible.~~
- ~~3. Focus on fisheries with the greatest impacts.~~
- ~~4. Focus on regions of highest catches and on spawning areas.~~
- ~~5. Reduce surplus capacity.~~
- ~~6. Restrict the use of purse seines set on fish aggregating devices (FADs).~~
- ~~7. Consider exempting fleets that catch less than 1 percent of the total Pacific-wide catch from some or all measures.⁴~~
- ~~8. Improve species-specific fishery monitoring.~~
- ~~9. To the extent practicable, the U.S. should seek RFMO decisions that are consistent with National Standard 1 of the MSA and its guidelines as codified.~~

~~Half of the elements in this list, (2-6) are concerned with minimizing fishing mortality of bigeye, while the remainder are concerned with participation in fisheries and monitoring and management of pelagic fishing. With respect to principles and priorities for research and data collection, the Council recommends that the U.S. should also promote the following:~~

- ~~1. Determine consistent science-based reference points that are appropriate for management use. In the absence of international reference points, the Council will promote the establishment and application of MSY-based reference points and associated control rules with respect to preventing and ending overfishing.~~
- ~~2. Improve stock assessments that provide region-specific information and understanding of recruitment.~~
- ~~3. Promote pan-Pacific assessments that provide region-specific information.~~
- ~~4. Improve understanding of responses to FADs.~~
- ~~5. Investigate gear and fishing characteristics of vessels with above-average CPUE.~~
- ~~6. Collect and define vessel and gear attributes useful for effort standardization for all fleets.~~
- ~~7. Define total costs of management on governments and participants.~~

~~The Council may modify elements of its strategy, consistent with recommendations from IATTC staff or~~

⁴ ~~With respect to exempting fleets with comparably minimal historical catch (e.g., less than 1 percent of the total), the Council supports using a formula such as that described in IATTC Resolution C-06-02. This resolution applies to longline vessels, but in the event of the adoption of national quotas applicable to a wider range of fisheries, a similar formula to accommodate traditional participation should be considered.~~

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~~other scientific advisory bodies (such as the Councils' SSC), in order to further support ending overfishing on bigeye tuna in the EPO and Pacific-wide.~~

~~4.5.1.2 Rationale for Recommendations~~

~~In proposing measures to the IATTC it is essential to avoid confusion and potential conflict between that organization and the WCPFC with respect to management measures regarding FMU species subject to overfishing. Moreover, the areas of competence of these two RFMOs overlap in the South Pacific, so it is essential that management measures are harmonized as far as possible. The Pacific Council will principally focus on providing advice to the IATTC to address overfishing in the EPO, but as appropriate, may provide advice to the WCPFC for stocks, such as bigeye tuna, that for assessment purposes are considered a single, Pacific-wide stock.~~

~~The general recommendations outlined above, such as focusing on the fisheries with the greatest impacts and on the regions of highest catches and on spawning areas, reducing surplus capacity, and restricting the use of purse seine FADs, support the identification of those measures that will have a measurable impact on bigeye tuna conservation. Similarly, an exemption for those fleets that catch less than 1 percent of the total Pacific-wide catch (or some other, similar formula) from some or all measures recognizes the need to avoid overly burdening those fleets and countries which are peripheral in generating fishing mortality for bigeye tuna and other FMU stocks.~~

~~Reducing fishing capacity is a recognized goal and NMFS has stated that its target is to eliminate or significantly reduce overcapacity in 25 percent of federally managed fisheries by the end of 2009 and in a substantial majority of fisheries in the following decade. There is known to be an excess of purse seine capacity for skipjack tuna, as recognized by a 2001 resolution by the World Tuna Purse Seine Organization to achieve a 35% reduction in fishing effort by member countries. Although the purse seine vessels are targeting skipjack rather than bigeye tuna, they are a major contributor to fishing mortality through catches of bigeye and yellowfin juveniles around FADs. Consequently, reduction of purse seine fishing capacity overall would likely have a marked conservation benefit for bigeye and yellowfin tuna. In this regard, the IATTC promulgated resolutions in 2000 and 2003 to limit fishing capacity of purse seine vessels operating in the Eastern Pacific. The IATTC established a target of 158,000 m³ (well volume) for the total purse seine fleet in the Eastern Pacific, which took into account stock status and the rights of coastal States and other States with a longstanding and significant interest in the tuna fisheries of the Eastern Pacific to develop and maintain their own tuna fishing industries.~~

~~Restricting the use of FADs by purse seine vessels in the Pacific, to aggregate skipjack tuna, will reduce the overall catch of bigeye and yellowfin tunas, and specifically the catches of juvenile bigeye and yellowfin tunas, which also aggregate beneath FADs. It is expected that this reduction in juvenile bigeye catch will likely improve recruitment of bigeye tuna to the longline fishery, where fish are caught at larger sizes and at higher value. Improvements to spawning stock biomass would also result. Similarly, any measure designed to develop time/area closures in spawning grounds or areas of high juvenile bigeye and yellowfin tuna densities would reduce fishing mortality on spawning fish and reduce the catch of juvenile fish before they had a chance to recruit to the longline fishery.~~

~~The MSA's National Standard 1 establishes a process for the use of biomass-based reference points and fishing mortality limits to determine whether fisheries are overfished or subject to overfishing. In the absence of existing reference points from the RFMOs, the Council should propose reference points for relevant FMU species for consideration by the IATTC and the WCPFC. This will be useful to the Council as, at this time, outputs from these stock assessments generate the estimates of indicators used in the Council's overfishing control rule. Moreover, the United States, as a member of RFMOs, should establish and adhere to the general principles outlined above to guide the U.S. in developing and promoting~~

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~~conservation and management programs and associated monitoring and compliance.~~

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Table 4 1. Demographic and productivity comparisons of highly migratory MUS and selected prohibited species.

Species (yrs)	Age at Maturity (yr ⁻¹)	Fecundity (yr ⁻¹)	M ^{4/} (yrs)	Max. Age (yr ⁻¹)	Productivity (<i>r</i>) at B _{MSY} ^{2/} (yr ⁻¹)	PGR _{MAX} ^{3/} (yrs)	T _D ^{4/}
TUNAS							
Skipjack	4	Millions (eggs)	1.50	5	0.16-0.34	0.68	2.1
Yellowfin	2.5	"	0.90	8	0.11-0.18	0.34	3.4
Bigeye	3	"	0.40	10	0.10-0.16	0.30	3.7
Albacore	4.5	"	0.30	12	0.07-0.11	0.20	5.2
Bluefin	5	"	0.25	20	0.07-0.10	0.19	5.6
BILLFISHES							
Str. Marlin	4	"	0.47	9	0.08-0.13	0.23	4.6
Swordfish	5	"	0.21	20	0.07-0.10	0.18	5.8
SHARKS							
Com. Thresh.	5	4 (pups)	0.234	19	0.04-0.07	0.12	9.2
S.F. Make	7	6	0.160	14	0.04-0.06	0.10	10.2
Blue	6	23	0.223	20	0.04-0.06	0.10	10.4
Pol. Thresh.	9	2	0.155	29	0.02-0.04	0.07	15.0
White	9	7	0.126	36	0.02-0.04	0.07	15.8
B.E. Thresh.	13	2	0.223	20	0.02-0.03	0.05	22.7
Basking	18	3	0.136	50	0.01-0.02	0.04	27.4
OTHER							
Dorado	-0.6	240K+ (eggs)	1.060	4	—>0.34	0.97	1.4

Footnotes:

1. M is instantaneous natural mortality. All life history parameters are from Smith et al. (1998), Smith et al. (In press 2003), Au et al. (In press).
2. Productivity *r* is the potential per-capita rate of population growth per year, here at B_{MSY}. Estimated for Tunas and Billfishes assuming that at B_{MSY}, F_{MSY} = 1.0M and initial fecundity increases by factor 1.00-1.25 [after Au et al. (In press)]; for Sharks assuming that at B_{MSY}, F_{MSY} = 0.5M-1.0M with fecundity not increased [after Smith et al. (In press)]. All figures are rounded.
3. PGR is the fractional Population Growth Rate per year. PGR_{MAX} is the maximum rate calculated as (e^{2r} - 1). Exploitation of the population (fraction of total population caught) greater than PGR_{MAX} should bring population collapse, hence PGR_{MAX} estimates maximum sustainable exploitation. The logistic model is assumed. Based on range of *r*.
4. T_D is the doubling time for populations depleted to 50% of B_{MSY} (hence the recovery time), calculated as (ln 2)/1.5*r* (the *r* is assumed to have increased linearly with the depletion, as per the logistic model). Based on range of *r*.

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Table 4-2. Summary of population status of management unit species at the time of FMP adoption (see text under species descriptions for details).

Species (Stock)	F/F _{MSY}	Over-fishing? ($>1.0?$)	B _{MSST} /B _{MSY} (1-M)	B/B _{MSY}	Over-fished? ($<1-M?$)	MinBiomass Flag-Ratio ($1.25(B_{MSST}/B_{MSY})$)	NeedAction? ($B/B_{MSY} < \text{FlagRatio?}$)
TUNAS							
Albacore (NP)	0.50	N	0.70	1.10	N	0.88	N ^{1/}
Bluefin (NP)	Unkn	n	0.75	Unkn	n	0.94	n ^{2/}
Bigeye (EPO)	1.11	y	0.60	1.11	N	0.75	N ^{3/}
Skipjack (EPO)	Unkn	n	0.50	2.50 ^{4/}	N	0.63	N
Yellowfin (EPO)	~1.30 ^{5/}	Y	0.50	~0.86 ^{5,6/}	N	0.63	N
BILLFISHES							
Str. Marlin (EPO)	0.70	N	0.50	1.07	N	0.63	N ^{7/}
Swordfish (EPO)	<1.00	N	0.70	>1.00	N	0.88	N ^{8/}
SHARKS							
C. Thresher (EPO)	<1.00 ^{9/}	N	0.77	~1.10 ^{9/}	N	0.96	N ^{10/}
P. Thresher (EPO)	Unkn	?	0.85	Unkn	?	1.05	? ^{11/}
BE Thresh. (EPO)	Unkn	?	0.78	Unkn	?	0.97	? ^{12/}
Mako (EPO)	<1.00	N	0.71	>1.00	N	0.88	N ^{13/}
Blue (EPO)	<0.50	N	0.78	>1.00	N	0.97	N ^{14/}
OTHER							
Dorado (EPO)	Unkn	Unlikely	0.50	Unkn	Unlikely	0.63	N ^{15/}

Note: Overfishing, Overfished, and Need Action columns ask if previous column value meets criterion; e.g., under Overfishing, is the previous fraction >1.0 ? Less certain Y/N is y/n.

Footnotes:

1. Note that stock is now in high productivity period (NPALW 2000).
2. No evidence of stock ill health, but abundance indexes are inconclusive (Bayliff 2001).
3. Assuming a stock-recruitment relationship (Maunder and Harley 2002). See text for caveats.
4. Boggs et al. 2000.
5. From production model (Tomlinson 2001, IATTC 2000).
6. Assuming a stock-recruitment relationship, B/B_{MSY} for 2001 could be 1.09 (Maunder 2002).
7. EPO stock has recovered (Hinton and Bayliff 2002a).
8. Per cpue patterns in EPO (Hinton and Bayliff 2002b).
9. Work in progress, D.W. Au and C. Shaw, SWFSC/NMFS, La Jolla, CA
10. Stock in recovery with positive population growth since 1992-94.
11. Status unknown, but catches incidental and on edge of species' broad range.
12. Status unknown, but catches incidental and possibly on edge of species' habitat.
13. Fishery takes mostly juveniles on edge of range; adults largely unavailable.
14. See text re Kleiber et al. stock assessment.
15. Highly productive and widely distributed throughout tropical/subtropical Pacific.

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Table 4-3. Stockwide and regional (CA, OR, WA) catches in thousand (K) mt for management unit species at the time of FMP adoption, with respect to MSY, sustainability, and regional harvest guidelines.

			Catches (K mt round-wgt, 1995-99 period)			Status		
Species (Stock)	MSY (or proxy)	OY (or proxy)	Stock-wide	Regional		Regional Catch		Harvest Guideline
				Comm'l	Rec'l	Fract'n	Sust'l?	
1. TUNAS								
Albacore (NP)	120 ^{1f}	(120)	—67-128 ^{2f}	10-18	<0.05-1.31	0.16	Y	
Bluefin (NP)	(20) ^{3f}	(15)	13-24 ^{4f}	<1-5	<0.05	0.10	Y	
Bigeye (EPO)	79 ^{5f}	(79)	64-94 ^{4f}	#0.1		<0.01	Y	
Yellowfin (EPO)	270 ^{6f}	(270)	244-306 ^{4f}	1-6	0.12-0.84	0.01	Y	
Skipjack (EPO)	(190) ^{3f}	(190)	137-295 ^{4f}	4-7	<0.1	0.03	Y	
2. BILLFISHES								
Str. Marlin (EPO)	4.5 ^{7f}	(3.4)	2-4 ^{7f}	<0.02	—0.03	0.01	Y	
Swordfish (EPO)	(12.5) ^{8f}	(12.5)	—8-15 ^{4f}	1-2	<0.01	0.12	Y	
3. SHARKS								
Gm Thresher(Reg'l)	(0.45) ^{9f}	(0.34)	Unkn	0.27-0.33	0.01-0.06	?	Y	0.34 ^{10f}
PI Thresher(Reg'l)	(0.020) ^{11f}	(0.015)	Unkn	0.004 ^{12f}		?	y	
BE Thresher(Reg'l)	(0.04) ^{13f}	(0.03)	Unkn	0.01-0.03		?	y	
Mako/Bonito(Reg'l)	(0.20) ^{14f}	(0.15)	Unkn	0.06-0.13	0.01-0.08	?	Y	0.15 ^{10f}
Blue (NP)	~120 ^{15f}	(90)	>50 ^{16f}	0.08-0.17 ^{17f}	<0.03	<0.01	Y	
4. OTHER								
Dorado (EPO)	(0.45) ^{3f}	(0.45)	0.22-0.56 ^{18f}	<0.01-0.04	<0.01-0.08	0.04	Y	

MSY: from catch-effort relationships, unless a proxy. **Proxy MSY:** average stock-wide catches over appropriate years or (minimal) local (West Coast) MSYs (LMSY) including local average levels of catch. **OY:** equal to MSY or to 0.75MSY (bluefin tuna, str. marlin, sharks). **Stock-wide Catch:** 1995-99 catches. **Regional Commercial Catches:** 1995-99 West Coast catches from PacFIN data base (Table 2-1); also drift gillnet catches (str. marlin, blue shark) extrapolated from SWFSC Observer Records, 1995-99. Except for albacore, these catches are mainly from within the EEZ. **Regional Recreational Catch:** CPFV (Table 2-57) and RECFIN (Table 2-58) data, and assuming 12.9kg/bluefin, 7.1kg/yellowfin, 2.4kg/skipjack, 7.3kg/albacore, 6.5kg/dorado, 113kg/swordfish, 16.7kg/mako, and 28.1kg/thresher; also, assuming 59kg/str. marlin, 300 sport-caught fish/yr. **Status:** Less certain Y/N is y/n re sustainability. **Harvest Guideline:** for shark species of regional/local concern; equal to the OY proxy.

Footnotes

- 1.— Average MSY over low and high productivity periods (Bartoo and Shiohama 1985, NPALW 2000). See text.
- 2.— NPALW 2000
- 3.— Mean of 1995-99 stock-wide catches.
- 4.— IATTC 2001
- 5.— MSY between 66 and 92 K mt from production models (IATTC 2000).
- 6.— From production model (Tomlinson 2001, IATTC 2000).
- 7.— MSY and catches from Hinton and Bayliff (2002a).
- 8.— Average of 1995-99 catches; an analytically derived MSY is pending.
- 9.— LMSY proxy by Population Growth Rate (PGR) method; is a minimal estimate of MSY (see text).
- 10.— The OY proxy = 0.75MSY.
- 11.— LMSY proxy as average catch during strong El Niño years (here 1983, 1984, and 1997) when species presence became significant.
- 12.— Average catch 1995-99 excluding 1997 (strong El Niño year).
- 13.— Average catch 1982-99.
- 14.— LMSY proxy as average 1981-1999 regional catch; is a minimal estimate of MSY (see text).
- 15.— After Kleiber et al. (see text).
- 16.— Estimated N. Pacific catches after Nakano and Seki (MS) (see text).
- 17.— Catches from SWFSC DGN observer data base, plus other fisheries landings (Tables 2-1, 2-40, 2-42). No data on LL bycatches.

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18. —FAO Area 77 catches.

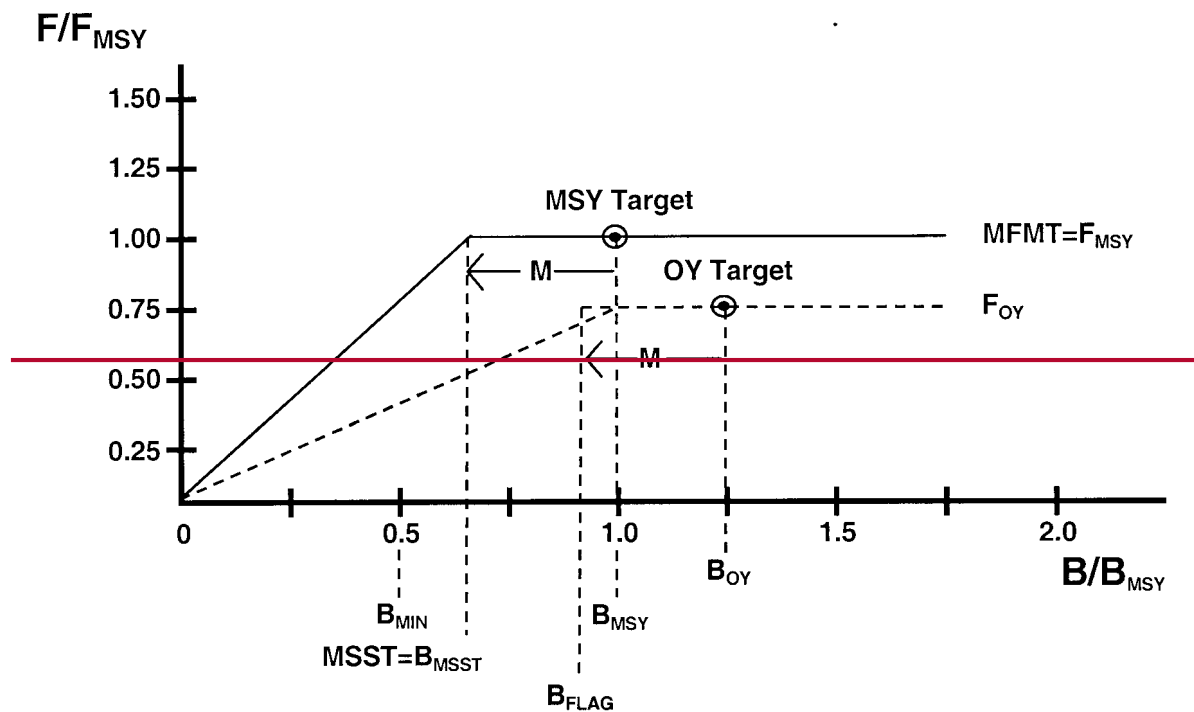


Figure 4-1. General model of maximum sustainable yield and optimum yield control rules, according to Restrepo et al. (1998).

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6.0 Management Measures

6.1—General Conservation and Management Measures

~~This s~~Sections 6.1 through 6.5 describes the general elements of the FMP that affect ~~the~~HMS fisheries directly. Many of these elements address fundamental requirements of the Magnuson-Stevens Act and other applicable law. They can be modified through framework procedures if the Council so chooses. Section 6.6 describes fishery-specific management measures.

6.1.1—6.1 Legal Gear and Gear Restrictions

Background

Various state restrictions on gear exist in Washington, Oregon, and California. A listing of current state regulations in Washington, Oregon, and California at the time of plan adoption is in Appendix B to the HMS FMP FEIS (PFMC 2003).

~~For commercial fisheries, all three states allow the use of troll gear or hook and line gear.~~

~~In Washington, gillnet, harpoon, pelagic longline and purse seine gear are not listed as authorized gear. Sharks may be caught with otter trawl, beam trawl, set lines, bottomfish pots, commercial jig, and troll lines. (Note: sharks are classified by Washington as bottomfish and as such these are legal gears for sharks.) It is unlawful to use bottomfish trawl gear in state waters (0-3 miles).~~

~~In Oregon, most HMS are classified as ocean food fish. Legal gears for ocean food fish include handline, pole and line, longline, seines, spears, trawls, and pots. Drift gillnets may be used to harvest swordfish under a developmental fishery permit. It is unlawful to use gillnets to target thresher shark. Oregon has provisions for developmental longline fisheries for swordfish and blue shark outside 25 miles.~~

~~In California, legal gears are gillnets, drift gillnets, and trammel nets, purse seine and harpoon; set lines are legal in open ocean waters, but may not be used for shortfin mako, thresher, swordfish, or marlin. Pelagic longline gear is prohibited by California, but longliners may fish outside the EEZ and land in California.~~

~~HMS recreational gear is comparable coastwide, with troll and hook and line gears used in each state. “Mousetrap gear” is specifically prohibited in California. (Mousetrap gear means a free floating set of gear thrown from a vessel, composed of a length of line with a float on one end and one or more hooks or lures on the opposite end.)~~

~~The Federal List of Fisheries is a list of authorized~~Authorized fisheries under the authority of each regional fishery management council and all fishing gear used in each fishery in the EEZ.~~The following non FMP fisheries (and gear) related to HMS are included in the List of Fisheries under the authority of the PFMC: are listed in Federal regulations (50 CFR 600.725). The use of any gear or participation in a fishery not on the list of authorized fisheries and gear is prohibited. Additional definitions and relevant regulations may appear elsewhere in Federal regulations, controlling the use of gear whether or not on the list at 50 CFR 600.725(v). An individual fisherman may notify the Council of the intent to use a gear or participate in a fishery not already on the list and the Council then has 90 days to regulate or prohibit the use of the gear.~~

- ~~• Thresher shark and swordfish drift gillnet fishery (gillnet);~~
- ~~• Shark and Bonito longline and set line fishery (longline);~~
- ~~• Pacific albacore and other tuna hook and line fishery (hook and line);~~

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- ~~• Pacific swordfish harpoon fishery (harpoon);~~
- ~~• Pacific yellowfin, skipjack tuna, purse seine fishery (purse seine);~~
- ~~• Recreational fishery (spear, trap, handline, pot, hook and line, rod and reel, hand harvest).~~
- ~~• Commercial fishery (trawl, gillnet, hook and line, longline, handline, rod and reel, bandit gear, cast net, spear)~~

~~The List of Fisheries will need to be modified after implementation of this FMP to be consistent with the definition of legal HMS gear in the FMP.~~

~~This FMP authorizes commercial legal HMS gear as harpoon, surface hook and line, drift gillnet (14 inch stretched mesh or greater), purse seine, and pelagic longline. For recreational gear the FMP authorizes rod and reel, spear, and hook and line. The rationale for gear definitions is the FMP needs uniform definitions of gear so that management can be consistent and unambiguous, coast wide.~~

~~Gear specifications are as follows:~~

~~**Legal Gears and Definitions.** The following gears would be authorized for the commercial and recreational harvest of HMS in the EEZ by all vessels, and beyond the EEZ by vessels landing in West Coast ports. Specific management measures regulating the use of legal gear types will be developed if necessary, using the framework procedures of this FMP. Gear that is not defined as legal gear is prohibited.~~

~~Commercial Gear~~

~~Legal commercial HMS gear includes:~~

- ~~• **Harpoon:** ~~fishing~~**Fishing** gear consisting of a pointed dart or iron attached to the end of a line several hundred feet in length, the other end of which is attached to a flotation device. Harpoon gear is attached to a pole or stick that is propelled only by hand, and not by mechanical means.~~
- ~~• **Surface Hook and Line:** ~~one~~**One** or more hooks attached to one or more lines (includes troll, rod and reel, handline, albacore jig, live bait, and bait boat; excludes pelagic longline and mousetrap gear {defined above}). (Mousetrap gear means a free floating set of gear thrown from a vessel, composed of a length of line with a float on one end and one or more hooks or lures on the opposite end.)~~
- ~~• **Large Mesh Drift Gillnet:** ~~a~~**A** panel of netting, suspended vertically in the water by floats along the top and weights along the bottom, which is not stationary nor anchored to the bottom. ~~Drift gillnet~~**Large-mesh** ~~size: This FMP specifies that HMS drift gillnets (used to target HMS) must behave a~~ minimum stretched mesh size of 14 inches. This definition minimizes potential problems from additional bycatch, protected species interactions, and competition with other fishery sectors ~~by disallowing a relatively new fishery (small mesh gillnet) that targets HMS; precautionary in limiting additional new fishing on HMS.~~ Small-mesh gillnet may not be used to target HMS. This description is consistent with the historic use of large-mesh drift gillnet to target swordfish and sharks.~~

~~This measure is consistent with the historic use of drift gillnet used to target swordfish and sharks. It would mean that small mesh drift gillnet gear cannot be used to target HMS.~~

- ~~• **Purse Seine:** ~~a~~**A** floated and weighted encircling net that is closed by means of a purse line threaded through rings attached to the bottom of the net (includes encircling net, purse seine, ring net, drum purse seine, lampera net).~~

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- Pelagic Longline: ~~a~~A main line that is suspended horizontally in the water column, which is not stationary nor anchored, and from which dropper lines with hooks (gangions) are attached.

Recreational Gear

Legal recreational gear includes:

- Rod-and-Reel (pole-and-line): ~~a~~A hand-held (including rod holder) fishing rod with a manually or electrically operated reel attached.
- Spear: ~~a~~A sharp, pointed, or barbed instrument on a shaft. Spears can be operated manually or shot from a gun or sling.
- Hook and Line: ~~one~~One or more hooks attached to one or more lines (excludes mousetrap gear).

~~Adjustments to Definition~~These definitions of Legal Gear assure consistent and ~~Gear Restrictions~~

~~The FMP authorizes the modification of unambiguous coastwide management. However, the framework adjustment procedures (Chapter 5) may be used to modify the definition~~definitions of legal fishing gear. ~~New commercial or recreational fishing gears may be authorized, authorize new gears, or prohibit use of existing legal gears may be prohibited using the framework adjustment procedures. Implementation or modification of commercial or recreational gear restrictions. Therefore, the above list is authorized. not definitive.~~

Gear restrictions may specify the amount, dimensions, configuration or deployment of commercial and recreational fishing gear, for example minimum mesh size or the number of hooks. ~~Any changes~~Changes in gear regulations should ~~be scheduled to~~ minimize costs to the fisheries, insofar as this is consistent with achieving the goals of the change.

6.2 Fishery Monitoring

~~6.2.5~~ 6.2.1 Permits

Permits are a standard tool used in virtually all fishery management plans to support management by:

- ~~enhancing~~Enhancing or facilitating collection of biological, economic or social data.
- ~~facilitating~~Facilitating enforcement of laws and regulations.
- ~~identifying~~Identifying those who would be affected by actions to prevent or reduce excess capacity in the fishery.
- ~~providing~~Providing information to meet international obligations.

A special kind of permit ~~is may be required~~ for limited entry into a fishery. ~~However, no limited entry systems are proposed at this time.~~ Implementation of a limited entry program would require ~~a plan~~an FMP amendment. ~~The Council adopted a control date of March 9, 2000 for commercial and charter fisheries for HMS, in anticipation that a limited access program may be needed in the future.~~

Commercial Permits

This FMP requires a federal permit for all commercial HMS vessels that fish for HMS off of, or land HMS in, the States of California, Oregon, and Washington. This general HMS permit is endorsed with a specific endorsement for each gear type to be used (harpoon, drift gillnet, surface hook and line, purse seine, and pelagic longline). Initially, there will be are no qualification criteria, such as minimum amount of landings, to obtain specific gear endorsements. Any commercial fisher may obtain the required gear endorsements.

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The permit is ~~to be~~ issued to a vessel owner for each specific fishing vessel used in commercial HMS fishing. This action is a practical procedure for tracking and controlling, by permits, commercial HMS fishing activities and the effects of regulations on those activities.

Regulations implementing the FMP establish the permitting system and set the terms and conditions for issuing a permit. ~~Initially, there will be no qualification criteria, such as minimum amount of landings, to obtain specific gear endorsements. Any commercial fisher may obtain the required gear endorsements.~~ The permits and endorsements are subject to sanctions, including revocation, as provided by Section 308 (g) of the Magnuson-Stevens Act. Permit requirements could be changed in the future under the framework procedures (~~Section~~Chapter 5-1). This permit program would not eliminate existing state permit or licensing requirements, or federal permits under the High Seas Fishing Compliance Act.

Recreational Permits

This FMP requires a federal permit for all commercial passenger recreational fishing vessels (CPFV) that fish for HMS, but an existing state permit or license for recreational vessels ~~could can~~ meet this requirement. The Council ~~will, however, request~~requests states to incorporate in their existing CPFV permit systems an allowance for ~~an HMS~~a highly migratory species endorsement on the permits so that statistics ~~could can~~ be gathered on that segment of the HMS fishery. – This action is a practical procedure for tracking and controlling, by permits, recreational HMS fishing activities and the effects of regulations on those activities.

~~6.2.66.2.2~~ Reporting Requirements

The Magnuson-Stevens Act requires that FMPs specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, and charter fishing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors (~~See~~Section 303(a)(5)).

Catch, effort, and catch disposition data are critical for monitoring the fisheries, assessing the status of the stocks and fisheries, and evaluating the effectiveness of management. ~~Data~~Historically, data necessary for management of HMS ~~have were~~ not been regularly or fully collected by state, federal ~~and, or~~ international ~~agencies under existing provisions~~organizations. HMS reporting requirements for basic catch-effort and bycatch are inconsistent among the states and ~~the federal government and do not cover all HMS fisheries operations or do not collect all data needed for stock and fishery monitoring. The NMFS requires logbooks under the High Seas Fishing Compliance Act for all vessels fishing outside the U.S. EEZ (purse seine, surface hook and line, longline) and the formats of the logs are tailored to the fishery specific needs. But the logbook requirements do not extend to fisheries in the EEZ. Logbooks are required for specific fisheries by non federal authorities: the IATTC (purse seine, baitboat), California (drift gillnet, harpoon, charter/party), Oregon (developmental gillnet, developmental longline). No other HMS reporting requirements exist in Washington or Oregon (although voluntary logbooks for various HMS fisheries are accepted).~~may be insufficient for stock and fishery monitoring. Various overlapping reporting requirements may apply to vessels fishing for HMS from the West Coast. Permitting under the High Seas Fishing Compliance Act, states, the IATTC, and the WCPFC all trigger reporting requirements that may vary across different fisheries. A uniform federal requirement for vessels catching HMS in the West Coast EEZ facilitates consistent reporting.

~~Current estimates indicate catch, effort and bycatch data are not captured for approximately 72% of the surface hook and line vessels fishing in the U.S. EEZ and an unknown percentage of the charter/party vessels operating from Oregon and Washington ports. In 2000, 28% of the estimated 710 surface hook-~~

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~~and line vessels fishing in the EEZ submitted logbooks. Currently 77% of the charter/party vessels coast-wide submit logbooks. The remainder of the HMS fisheries report catch and effort and bycatch data in one format or another to some collecting authority with approximately 100% reporting rate. Not all currently collected data are available to PFMC on a timely basis or in a detailed format making contemporary monitoring of some HMS stocks and fisheries difficult or problematic. Bycatch/incidental catch reporting is not consistent among fisheries and will need revision upon adoption of this FMP. PacFIN does not capture catch and effort data (allowing CPUE to be estimated), which is fundamental for stock assessment and monitoring and needed for preparation of SAFE documents.~~

~~All three states have far offshore fishery regulations that require fishers to declare when they plan to fish on the high seas. These fishers are then allowed to fish outside the EEZ, but cannot fish inside the EEZ during the same trip. All three states have exceptions for albacore troll vessels. The FMP does not propose federal regulations addressing declarations, because the state requirements are adequate.~~

~~This FMP requires all~~All commercial and recreational party or charter/CPFV fishing vessels ~~to fishing for HMS must~~ maintain and submit logbooks to NMFS. The original logbook form for each day of the fishing trip must be submitted to either NMFS or the appropriate state management agency. State or existing federal logbooks ~~could~~can meet this requirement as long as essential data elements are present, and data are available to NMFS subject to a data exchange agreement. ~~Authorizes adjustment of⁵ In any case, existing state reporting requirements, including those for landing receipts, would remain in effect. These reporting requirements may be adjusted under the framework process. This action is a practical procedure for (Chapter 5). These requirements facilitate obtaining commercial (including CPFV) catch and effort data for and allows for NMFS to develop a standardized NMFS data based database on West Coast fisheries.~~

~~The operator of any commercial fishing vessel and any charter vessel fishing for HMS is required to maintain on board an accurate and complete record of catch, effort and other data on logbook forms provided by NMFS or a state agency. The original logbook form for each day of the fishing trip must be submitted to either the Southwest Regional Administrator of NMFS or the appropriate state management agency. Existing state or federal logbook forms may be used. These include logbooks required by: 1) the Tuna Conventions Act, the FMP for Pelagic Fisheries of the Western Pacific Region, the High Seas Fishing Compliance Act, and any logbook required by California, Oregon or Washington. These logbook forms can be found in the HMS FMP FEIS (PFMC 2003), Appendix D. Information required to be submitted on logbooks may be revised in the future. Existing state reporting requirements, including those for landing receipts, would remain in effect.~~

6.1.46.2.3 *Fishery Observer Authority*

Observer programs are important for obtaining accurate information on total catch, catch disposition and protected species interactions, and also for detailed biological data and samples that managers cannot expect fishers to collect. Catch disposition information importantly includes data on bycatch, for which observers are indispensable in most cases (Section 6.1.3). ~~Observers' observations can~~Observation also can be very useful to better understand how different gears are actually deployed and how practical and effective regulations actually are. ~~Most FMPs provide observer~~Observer placement authority for NMFS ~~in the interest of~~facilitates obtaining more accurate and complete information about ~~their~~ fisheries. ~~The Council and NMFS recognize, however, that~~However, observers may not be suitable for all vessels, ~~that~~; smaller vessels may not have accommodations for observers, and vessels that take extended trips are much more costly to observe. Therefore, it is incumbent on NMFS to develop an observer sampling plan that, in addition to the scientific objectives, also recognizes the different types of vessels and vessel capabilities in

⁵ Samples of logbook forms at the time the FMP was implemented can be found in the HMS FMP FEIS (PFMC 2003), Appendix D.

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the various fisheries.

An observer program must include a sample design and cost analysis (including impacts on the vessels being sampled) for Council review and comment prior to implementing the program. The sampling design will include sampling rate, which is a function of the required sample size for determining take rates or amounts with a given precision. When a take amount is the result of infrequent events, as in certain protected species interactions, very large sampling of a fleet is needed for its precise estimation, and cost will be the determining factor for sample size.

~~The FMP authorizes~~ NMFS ~~to may~~ require that vessels carry observers when directed to do so by the NMFS Regional Administrator, ~~and mandates observer programs initially for the longline, surface hook and line, small purse seine, and commercial passenger fishing vessel (CPFV) fisheries, with NMFS.~~ NMFS ~~is~~ will ~~also to~~ develop initial observer sampling plans within six months of FMP implementation. NMFS ~~is will~~ also ~~to~~ develop initial observer sampling programs for the private recreational fisheries at a later date. ~~The This~~ FMP focuses initially on the fisheries inadequately or not monitored under federal authority (MMPA, ESA) in meeting the FMP goal of documenting and reviewing bycatch mortality and protected species interactions in the HMS fisheries. Observer programs are initially mandated for the longline, surface hook-and-line, small purse seine, and commercial passenger fishing vessel (CPFV) fisheries.

~~The Prior to implementation of this FMP, the~~ large- and small-mesh ~~DGN~~ drift gillnet fisheries already ~~have had~~ MMPA-mandated observer programs, and the pelagic longline fishery ~~has recently come~~ came under an ESA mandate for observers. These programs will be periodically reviewed by the ~~HMS management team~~ HMSMT for adequacy in meeting the goals of this FMP (important if the sampling rates in the protected species programs are reduced).

6.1.36.3 Bycatch (Including Catch and Release Programs) Monitoring and Minimization

The Magnuson-Stevens Act requires that bycatch in fisheries be assessed, and that the bycatch and bycatch mortality be reduced to the extent practicable. Specifically National Standard 9 states that an FMP shall establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority: 1) minimize bycatch; and 2) minimize the mortality of bycatch which cannot be avoided.

Bycatch has been identified as a concern in HMS drift gillnet and longline fisheries and large-vessel purse seine fisheries (see Appendix C). Anecdotal accounts indicate bycatch in the small-vessel HMS purse seine and albacore troll fishery is relatively low, but these fisheries have not had formal observer programs. The harpoon fishery is thought to have little if any bycatch due to the selective nature of the gear.

6.1.3.16.3.1 Establishing a Standardized Bycatch Reporting Methodology

The Council examined existing bycatch reporting methodology, and found that current logbook requirements for the various fisheries (states, NMFS and IATTC), together with periodic recreational fishing surveys and port sampling, have provided an important source of information on catch and bycatch for all HMS fisheries (Appendix C, section 5). Nonetheless, certain additional measures were considered to provide improved standardization of logbook reporting and better ground-truthing of the logbook data through pilot observer programs for some of the presently unobserved fisheries. Observer programs are authorized consistent with observer sampling plans prepared by NMFS (Section 6.6). All commercial and recreational party or charter/CPFV fishing vessels must maintain and submit to NMFS logbook records containing catch and effort statistics, including bycatch (Section 6.3). These measures, together with existing reporting requirements, should provide for a comprehensive standardized bycatch reporting system.

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~~6.1.3.26.3.2~~ *Minimizing Bycatch and Bycatch Mortality*

Additional actions that will have the effect of reducing bycatch and bycatch mortality are discussed in Appendix C and under the various fishery-specific actions in Sections 6.~~26~~.1 (drift gillnet fishery), and 6.~~26~~.2 (pelagic longline fishery).

The FMP provides for a fishery-by-fishery review of measures to reduce bycatch and bycatch mortality (see Appendix C); establishes a framework for implementing bycatch reduction~~;~~² adopts measures to minimize bycatch in pelagic longline and drift gillnet fisheries (Section 6.~~2~~;~~6~~), and adopts a formal voluntary “catch-and-release” program for HMS recreational fisheries. This meets the goals of the Magnuson-Stevens Act and of this FMP and the requirements for estimating bycatch and for establishing measures to reduce bycatch and bycatch mortality in HMS fisheries.

The framework procedure ~~is may be used~~ to ~~allow efficient implementation of~~ **implement additional** bycatch reporting and reduction measures ~~as needed and as is practical~~. Potential measures/methods include but are not limited to:

- logbooks
- observers
- time/area closures
- gear restrictions or modifications, or use of alternative gear
- educational programs
- performance standards
- real-time data collection programs (e.g., VMS, electronic logbooks)

The voluntary “catch-and-release” program ~~is to promote~~**promotes** reduction of bycatch mortality and waste by encouraging the live release of unwanted fish. Its rationale and origination for recreational fisheries is explained in Appendix C, section C.7. The establishment of the catch-and-release program removes live releases in the recreational fisheries from the “bycatch” category as defined in the Magnuson-Stevens Act ~~at 16 U.S.C. 1802~~**in Section 3**(2) and also promotes the handling and release of fish in a manner that minimizes the risk of incidental mortality, encourages the live release of small fish, and discourages waste.

Shared EC Species, identified in Section 3.3, could continue to be taken incidentally without violating Federal regulations, unless regulated or restricted for other purposes, such as with bycatch minimization regulations. The targeting of Shared EC Species is prohibited.

~~6.1.56.3.3~~ *Protected Species*

Various federal laws provide protection for special resources, including those for protected species under ESA, MMPA, and MBTA. Interactions of HMS fishing gears with protected species are described in Appendix D. This FMP authorizes the adoption of measures to minimize interactions of HMS gears with protected species and to implement recommendations contained in Biological Opinions (ESA), Take Reduction Plans (MMPA), Seabird Management Plans, or other relevant documents pertaining to HMS fisheries. The FMP also authorizes programs to collect information on interactions in any or all HMS fisheries.

Fishery-specific measures affecting protected species are included in the initial management measures for drift gillnet and longline fisheries (Sections 6.2.1, 6.2.2). Protected species interactions with the other gear types are not major issues (Appendix D), and no alternatives were considered for those gears.

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The FMP adopts a framework authorization for protected species conservation measures and implements initial conservation and management measures for drift gillnet and pelagic longline fisheries as described in section 6.2, Appendix D and the HMS FMP FEIS (PFMC ~~2006~~2003, sections 9.2.5.1-2). ~~÷~~ The FMP requires general provision for its proposed protected species measures and also for future measures to reduce the takes of protected species and to minimize the risk of adverse impacts from those takes. The framework provisions of the FMP would be used to address new protected species concerns as they are identified.

Both through the SAFE Report and through special reports from interested parties (which could include the USFWS or environmental organizations), the Council

- ~~will~~ ~~be~~ advised of new protected species concerns;
- ~~will~~ direct the ~~plan team~~HMSMT or others to investigate and recommend action;
- ~~will~~ determine if action is needed and, if it is viewed as a matter of substantial concern, will direct the completion of necessary documents to analyze the issues and evaluate alternatives; and
- ~~will~~ submit recommendations for corrective action to NMFS for consideration.

If ~~such~~ an action ~~were~~is recommended by the Council and approved by NMFS, the action will be implemented by NMFS.

In fisheries where protected species takes are already being addressed, as by the Pacific Offshore Cetacean Take Reduction Team (POCTRT) for the drift gillnet fishery, any recommendations and supporting analyses, as by POCTRT, will be provided by NMFS to the Council for consideration. The Council will make recommendations as it deems appropriate to NMFS, which will make final decisions on whether to proceed with rulemaking under the MMPA or Magnuson-Stevens Act, as appropriate.

~~6.1.66.3.4~~ Prohibited Species

As indicated in Section 3.4, certain species are proposed to be designated as “prohibited species” under the FMP, meaning that they cannot be retained, or can be retained only under specified conditions, by persons fishing for management unit species. Three species of shark, as well as Pacific halibut and Pacific salmon, are recommended for this designation. The designation of prohibited species could be changed using framework procedures.

This FMP prohibits retention of great white, basking, and megamouth sharks (except for sale or donation of incidentally-caught specimens to recognized scientific and educational organizations). This FMP also prohibits retention of Pacific halibut and salmon (except when caught with authorized gears during authorized seasons) ~~and adopts a framework authorization for changes in prohibited species designations.~~ ~~÷~~ Neither the populations of these rare or low productivity sharks nor the strict management of halibut and salmon should be compromised by HMS fisheries. The prohibited species status of halibut and salmon is also consistent with U.S. policy and other FMPs.

The great white shark’s low productivity, its accessibility in certain localized areas, and its appeal to trophy hunters make it especially vulnerable to depletion. The species has been protected in the State of California since 1995; it may not be taken except for scientific and educational purposes under State permit. The sale (or donation) of incidentally-caught specimens, live or dead, to recognized scientific and educational organizations for research or display purposes would be allowed.

Megamouth sharks are extremely rare, though ~~4 have been~~they are taken in the drift gillnet fishery ~~in recent yearson rare occasions~~. Protection is recommended because of extreme rarity and uniqueness. Sale (donation) of incidentally caught specimens to recognized scientific and educational organizations for

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research or display purposes would be allowed.

Basking sharks occur in greatest numbers in the ~~eastern~~Eastern Pacific in autumn and winter months. The fins are valuable in ~~east~~East Asian markets. This species is recommended for protection because it is thought to be among the least productive of shark species and thus highly vulnerable to depletion. The north Pacific stock is listed as endangered by the World Conservation Union (IUCN Red List of Threatened Species). The sale (donation) of incidentally-caught specimens, live or dead, to recognized scientific and educational organizations for research or display purposes ~~would be~~is allowed.

Pacific halibut and Pacific salmon, while not HMS, are important as incidental catch in some HMS fisheries and so are recommended to be prohibited to ensure they are not targeted by HMS fishers, unless with authorized gear during authorized seasons. The fisheries that target halibut and salmon are already overcapitalized. Further, some runs of salmon are listed as threatened or endangered.

6.4 Controlling Catch

~~6.1.76.4.1~~ Quotas or Harvest Guidelines

Background

A *quota* is a specified numerical harvest objective for a stock, the attainment (or expected attainment) of which causes the complete closure of the fishery or fisheries for that species. A *harvest guideline* is a numerical harvest level that is a general objective and is not a quota. A harvest guideline and an annual catch target (ACT) are functionally equivalent. Attainment of a harvest guideline or ACT does not require a management response, but it does prompt review of the fishery. This will include a ~~Management Team~~HMSMT meeting to evaluate the status of the stock and to make recommendations.

Factors involved in choosing between a quota or harvest guideline/ACT include:

- the status of the stock and the need to prevent overfishing or rebuild overfished stocks;
- effects on bycatch;
- impacts on fisheries;
- achievement of the FMP goals and objectives
- ability to monitor catches during the season;
- U.S. obligations under an international agreement.

Harvest guidelines/ACTs can help prevent overfishing or localized depletion of vulnerable species, or can be used in implementing management decisions by international HMS management bodies. Allocation of guideline amounts among fisheries may be necessary (see following section).

~~As explained in Chapter 4, the harvest guidelines for common thresher and shortfin mako sharks are based on a “local MSY” concept. The thresher shark harvest guideline is lower than the recommended harvest limit set in the tri-state fishery management plan for thresher shark. These two sharks are the only species with harvest guidelines thus far proposed.~~

This FMP establishes harvest guidelines for selected shark species and authorizes establishment or modification of quotas or harvest guidelines under the framework provisions. These harvest guidelines are based on a “local MSY” concept. Initial harvest guidelines- for common thresher and shortfin mako sharks, are set equal to an OY estimate specified as 0.75MSY. The MSY used is the local MSY (LMSY), as the stock-wide maximum sustainable harvests are not known.

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The initial harvest guidelines are $OY=0.75 \times LMSY$, as follows:

common thresher	340 mt (round weight)
shortfin mako	150 mt (round weight).

The rationale for these harvest guidelines is that, as vulnerable species in this FMP and with total catches and extent of stocks poorly known, management of these sharks under precautionary harvest guidelines is appropriate. The thresher shark harvest guideline is lower than the recommended harvest limit set in the tri-state fishery management plan for thresher shark in place prior to FMP implementation.

These harvest guidelines pertain only to the portion of the stocks that are vulnerable to capture by West Coast vessels as they now fish. They are particularly conservative ~~as LMSY~~ because local MSY necessarily underestimates stock-wide MSY. The guidelines are catch benchmarks that warn of possible approach to the local sustainable maximum.

~~The HMS Management Team, at its annual meeting in May or June,~~ The HMSMT will review the catches from the previous statistical year (April 1-March 31) and compare those catches with the established harvest guidelines; evaluate the status of the stocks; and develop recommendations for management measures, as appropriate. These management measures will be presented to the Council as part of the SAFE document at its June and/or September meetings to be reviewed and approved for public review. Final action on management measures would be scheduled for the Council's November meeting ~~in the biennial cycle.~~

~~6.1.86.4.2~~ Allocation

This FMP authorizes allocation of HMS quotas or harvest guidelines among U.S. West Coast-based HMS fisheries if necessary using the full rulemaking framework process. In addition to other requirements of the FMP, the Council will consider the following factors when adopting allocations of HMS among domestic fisheries:

- present participation in and dependence on the fishery, including alternative fisheries;
- historical fishing practices in, and historical dependence on, the fishery;
- economics of the fishery;
- agreements or negotiated settlements involving the affected participants;
- potential biological impacts on any species affected by the allocation;
- consistency with the Magnuson-Stevens Act National Standards;
- consistency with the goals and objectives of the FMP.

The FMP does not establish initial quota allocations to different fisheries or fishery sectors, ~~with the exception of a 'No Sale' of Striped Marlin Proposed Action described in section 6.2. This action allocates striped marlin for sport use only except that the commercial sale of striped marlin is prohibited, a de facto allocation to the recreational sector. No compelling argument was raised for repealing the long-standing (since 1937) no-sale status of striped marlin in California and for establishing it as a commercial species on the West Coast.~~ Future allocations could be made using framework procedures. There is no pressing need to establish allocations ~~since no quotas are presently proposed. No compelling argument was raised for repealing the long-standing (California; since 1937) no-sale status of striped marlin and for establishing it as a commercial species on the West Coast as long as constraining ACLs are not implemented consistent with the international exception.~~

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~~6.1.26.4.3~~ *Incidental Catch Allowance*

Incidental catch refers to harvest of HMS which are unavoidably caught while fishing for other species or fishing with gear that is not legal for the harvest of HMS. This FMP authorizes the harvest and landing of incidental catches by gears not listed as legal HMS gears in the FMP up to a maximum number or percentage of the total weight, per landing. The incidental limit may be adjusted, or separate limits may be established for different non-HMS fisheries, in accordance with framework procedures described in this chapter. The objectives of allowing incidental catches are to:

- Minimize discards in fisheries using gear that is not legal for harvesting HMS, while increasing fishing income by allowing retention and sale of limited amounts of HMS.
- Discourage targeting on HMS by non-HMS fisheries; also reduces any associated take of marine mammals, sea turtles, and seabirds.

This FMP allows incidental commercial landings of HMS, within limits, for non-HMS ~~gear such as~~ gears (e.g., bottom longline, trawl, pot gear, small mesh drift gillnet, set/trammel gillnets, and others—). These landing limits are:

- ~~Small-mesh gillnetters and set-net gillnetters would~~ may not ~~be permitted to~~ land swordfish (as ~~currently required under~~ consistent with California law), but ~~would~~ are be permitted to land other HMS, with the restriction of 10 fish per landing of each non-swordfish highly migratory species. For the bottom
- Bottom longline ~~(set line) fishery,~~ landings ~~would be~~ are restricted to ~~3~~ three HMS sharks in total or 20% of total landings by weight of HMS sharks, whichever is greater by weight. For trawl
- Trawl, pot gear, and other non-HMS ~~gear,~~ gears are restricted to a maximum of 1% of total weight per landing for all HMS shark species combined ~~would be allowed~~ (i.e., blue shark, shortfin mako shark, ~~and bigeye, pelagic,~~ and common thresher ~~sharks~~ shark) or two ~~(2)~~ HMS sharks, whichever is greater. This discourages

These limits discourage targeting of HMS with non-HMS gears by limiting the allowed landings; reduces wastage of HMS by still allowing traditional levels of incidental catch by those gears.

These allowances are based on the frequency ~~distribution~~ of HMS in landings by non-HMS gears, and are intended to be practical with respect to the levels of HMS expected to be taken by non-HMS gears while not targeting HMS. A description of analysis used to determine these ~~rates in landings is given~~ limits may be found in the HMS FMP FEIS (PFMC ~~2006~~ 2003, section 9.2.4.2).

~~6.1.3~~ *Bycatch (Including Catch and Release Programs)*

~~6.2.46.4.4~~ *Prohibition on the Sale of Certain Species (No-sale Striped Marlin Provision)*

This FMP prohibits the sale of striped marlin by vessels under ~~PFMC~~ Council jurisdiction.

Rationale: Greater regional and national net benefits are obtained from continuing ~~east-wide~~ coastwide under federal authority the long standing, ~~traditional policy~~ (California) policy of reserving this species for sport use only.

Striped marlin is considered to have far greater value as a recreational rather than commercial target species, and is only available seasonally. Prohibiting its sale removes the incentive for its taking by commercial fishers.

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6.5 Other Measures

~~6.1.9~~ 6.5.1 *Treaty Indian Fishing*

This FMP authorizes adoption of measures and procedures to accommodate treaty fishing rights in the initial implementing regulations for the FMP. Also authorize revisions to the initial regulations through regulatory amendments, without the need to amend the FMP. The initial implementing regulations would contain the measures and procedures specified below. —This action is a practical procedure for accommodating treaty fishing rights, without need of plan amendments for revisions.

Initial Measures and Procedures

Under the FMP, the initial measures and procedures for accommodating treaty fishing rights are as follows:

- (a) Pacific Coast treaty Indian tribes have treaty rights to harvest HMS in their usual and accustomed (u&a) fishing areas in U.S. waters.
- (b) Pacific Coast treaty Indian tribes means the Hoh, Makah, and Quileute Indian Tribes and the Quinault Indian Nation.
- (c) The NMFS recognizes the areas set forth below as marine u&a fishing grounds of the four Washington coastal tribes. The Makah u&a grounds were adjudicated in U.S. v. Washington, 626 F.Supp. 1405, 1466 (W.D. Wash. 1985), affirmed 730 F.2d 1314 (9th Cir. 1984). The u&a grounds of the Quileute, Hoh, and Quinault tribes have been recognized administratively by NMFS. See, e.g., 64 Fed. Reg. 24087-24088 (May 5, 1999) (u&a grounds for groundfish); 50 C.F.R. 300.64(i) (u&a grounds for halibut). The u&a grounds recognized by NMFS may be revised as ordered by a federal court.
- (d) Procedures. The rights referred to in paragraph (a) will be implemented by the Secretary of Commerce, after consideration of the tribal request, the recommendation of the Council, and the comments of the public. The rights will be implemented either through an allocation of fish that will be managed by the tribes, or through regulations that will apply specifically to the tribal fisheries. An allocation or a regulation specific to the tribes shall be initiated by a written request from a Pacific Coast treaty Indian tribe to the NMFS Northwest Regional Administrator, at least 120 days prior to the time the allocation is desired to be effective, and will be subject to public review through the Council process. The Secretary recognizes the sovereign status and co-manager role of Indian tribes over shared Federal and tribal fishery resources. Accordingly, the Secretary will develop tribal allocations and regulations in consultation with the affected tribe(s) and, insofar as possible, with tribal consensus.
- (e) Identification. A valid treaty Indian identification card issued pursuant to 25 CFR Part 249, Subpart A, is prima facie evidence that the holder is a member of the Pacific Coast treaty Indian tribe named on the card.
- (f) Fishing (on a tribal allocation or under a federal regulation applicable to tribal fisheries) by a member of a Pacific Coast treaty Indian tribe within that tribe's usual and accustomed fishing area is not subject to provisions of the HMS regulations applicable to non-treaty fisheries.
- (g) Any member of a Pacific Coast treaty Indian tribe must comply with any applicable federal and tribal laws and regulations, when participating in a tribal HMS fishery implemented under paragraph (d) above.
- (h) Fishing by a member of a Pacific Coast treaty Indian tribe outside that tribe's usual and accustomed fishing area, or for a species of HMS not covered by a treaty allocation or applicable federal regulation, is subject to the HMS regulations applicable to non-treaty fisheries.

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~~6.1.10~~ 6.5.2 *Procedures for Reviewing State Regulations*

Any state may propose that the Council review a particular state regulation for the purpose of determining its consistency with the FMP and the need for complementary federal regulations. Although this procedure is directed at the review of new regulations, existing regulations affecting the harvest of highly migratory species managed by the FMP may also be reviewed under this process. The state making the proposal will include a summary of the regulation in question and concise arguments in support of consistency.

Upon receipt of a ~~state's~~ proposal, the Council may make an initial determination whether or not to proceed with the review. If the Council determines that the proposal has insufficient merit or little likelihood of being found consistent, it may terminate the process immediately and inform the petitioning state in writing of the reasons for its rejection.

If the Council determines sufficient merit exists to proceed with a determination, it will review the ~~state's~~ documentation or prepare an analysis considering, if relevant, the following factors:

- How the proposal furthers, or is not otherwise consistent with, the objectives of the FMP, the Magnuson-Stevens Act, and other applicable law
- Likely effect on or interaction with any other regulations in force for the fisheries in the area concerned
- Expected impacts on the species or species group taken in the fishery sector being affected by the regulation
- Economic impacts of the regulation, including changes in catch, effort, revenue, fishing costs, participation, and income to different sectors being regulated as well as to sectors that might be indirectly affected.
- Any impacts in terms of achievement of harvest guidelines or harvest quotas, maintaining year-round fisheries, maintaining stability in fisheries, prices to consumers, improved product quality, discards, joint venture operations, gear conflicts, enforcement, data collection, or other factors.

The Council will inform the public of the proposal and supporting analysis and invite public comments before and at the next scheduled Council meeting. At its next scheduled meeting, the Council will consider public testimony, public comment, advisory reports, and any further state comments or reports, and determine whether or not the state regulation is consistent with the FMP and whether or not to recommend implementation of complementary federal regulations or to endorse state regulations as consistent with the FMP without additional federal regulations.

If the Council recommends the implementation of complementary federal regulations, it will forward its recommendation with the proposed rule and rationale to the NMFS Regional Administrator for review and approval. The NMFS Regional Administrator will publish the proposed regulation in the *Federal Register* for public comment, after which, if approved, he/she will publish final regulations as soon as practicable. If the Regional Administrator disapproves the proposed regulations, he/she will inform the Council in writing of the reasons for disapproval.

~~6.1.11~~ 6.5.3 *Exempted Fishing Permits*

Background

Existing Federal Procedures. Exempted fishing is defined to be fishing practices that are new to a fishery and not otherwise allowed under an FMP. The NMFS Regional Administrator, using Federal EFP (Exempted Fishing Permit) procedures, may authorize the targeted or incidental harvest of HMS for experimental or exploratory fishing that would otherwise be prohibited. Applicants must submit their

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application package at least 60 days before the desired effective date of the EFP, provide a statement of purpose and goals of the EFP activity, the species (target and incidental) expected to be harvested, arrangements for disposition of all regulated species and any anticipated impacts on marine mammals or endangered species, and provide the times and places fishing will take place and the type, size and amount of gear to be used. There are no specific requirements. The Administrator may restrict the number of experimental permits by total catch, time, area, bycatch, incidental catch or protected species takes. The NMFS Regional Administrator may require any level of industry-funded observer coverage for these experimental permits.

Exempted fisheries are expected to be of limited size and duration and must be authorized by an EFP issued for the participating vessel in accordance with the criteria and procedures specified in 50 CFR ~~600.745~~. The duration of EFPs will ordinarily not exceed one year. Permits will not be renewed automatically. An application must be submitted to the Regional Administrator for each year. A fee sufficient to cover administrative expenses may be charged for EFPs. An applicant for an EFP need not be the owner or operator of the vessel(s) for which the EFP is requested as long as the proposed activity is compatible with limited entry and other management measures in the FMP.

The Regional Administrator or Director may attach terms and conditions to the EFP consistent with the purpose of the exempted fishing, including, but not limited to:

- (a) The maximum amount of each regulated species that can be harvested and landed during the term of the EFP, including trip limitations, where appropriate.
- (b) The number, size(s), name(s), and identification number(s) of the vessel(s) authorized to conduct fishing activities under the EFP.
- (c) The time(s) and place(s) where exempted fishing may be conducted.
- (d) The type, size, and amount of gear that may be used by each vessel operated under the EFP.
- (e) The condition that observers, a vessel monitoring system, or other electronic equipment be carried on board vessels operated under an EFP, and any necessary conditions, such as pre-deployment notification requirements.
- (f) Reasonable data reporting requirements.
- (g) Other conditions as may be necessary to assure compliance with the purposes of the EFP, consistent with the objectives of the FMP and other applicable law.
- (h) Provisions for public release of data obtained under the EFP that are consistent with NOAA confidentiality of statistics procedures at set out in subpart E. An applicant may be required to waive the right to confidentiality of information gathered while conducting exempted fishing as a condition of an EFP.

Additional FMP Requirements for an Exempted Fishing Permit. This FMP places additional requirements for authorizing an EFP for targeting HMS species, including EC species shared between all four Council FMPs. An EFP proposal will be required to follow a specific Council protocol and be reviewed by the Council prior to application to NMFS. EFP proposals targeting management unit species or HMS EC species will be subject to the protocol for EFPs for HMS Fisheries (Council Operating Procedure 20). EFP proposals targeting EC species shared between all four FMPs, including the HMS FMP, will be subject to the protocol for Shared EC Species (Council Operating Procedure #24). The protocols are intended to ensure the Council has adequate information on all aspects of the proposed fishery and has adequate time to consider, review and formulate recommendations. These protocols will be available from the Council. They will require additional detailed information and analysis beyond those specifically required for a NMFS EFP. The protocols will specify timing for submissions and timing for Council review.

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This FMP authorizes mandatory data reporting and mandatory on-board observers for vessels with exempted fishing permits (PFMC 2003, see section 9.2.4.6). Installation of vessel monitoring units (VMS) aboard vessels with exempted fishing permits may be also required.

The FMP requires that applicants submit for Council review and approval an initial EFP plan prior to formal application to NMFS, following ~~a specific Council-supplied EFP~~ the protocol, ~~which is to be developed by the HMS Management Team. The specific protocol will be available from~~ in the Council ~~as a Council Operating Procedure~~, specific to HMS fishery EFPs. The protocol as adopted or modified will include, but not be limited to, the following elements:

- schedule and procedure for submitting EFP applications;
- format for applications;
- qualification criteria for applicants;
- Council internal review procedures;
- relevant laws and regulations that must be followed.

To serve its constituents, the Council needs at this formal process through which it can review and make recommendations on the EFP applications to NMFS.

The Council will review, comment, and make recommendations on the plan and may require changes or request additional information. The final EFP plan and Council recommendations will then be provided by the applicant to NMFS for action. ~~An example of a fishery specific proposal is shown in the HMS FMP FEIS (PFMC 2003, section 9.2.5.2.1, Example of Exempted Longline Fishery Permit with Experimental Design).~~ NMFS review and any subsequent issuance of an EFP will ~~then proceed according to regulations specified in Code of Federal Regulations (at 50 CFR 600.745) pursuant to the procedures and criteria in that section.~~

~~6.1.12~~ 6.5.4 *Temporary Adjustments due to Weather*

The Council will consider and may provide, after consultation with the U.S. Coast Guard and persons utilizing the fishery, temporary adjustments for access to the fishery by vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safety of the vessels, except that the adjustment shall not adversely affect conservation efforts in other fisheries or discriminate among participants in the affected fishery. No adjustments due to weather are proposed at this time as the Council has no information from fishery participants or others to indicate that particular accommodations are needed to provide reasonable opportunity to harvest HMS. There are no quotas or allocations that could not be harvested due to poor weather.

~~6.1.13~~ 6.5.5 *Safety of Life at Sea*

National Standard 10 (NS-10) requires that conservation and management measures shall, to the extent practicable, promote the safety of human life at sea. The substantive requirements of NS-10 are fulfilled by Council, NMFS, USCG, and fishing industry consultation on the nature and extent of any adverse effects that proposed management measures may have on safety of human life at sea. The purpose of consultation is to identify and mitigate, to the extent practicable, any adverse effects. 50 CFR 600.355, which implements NS-10, provides lists of safety considerations and mitigation measures that could be considered. To fulfill NS-10, the Council will utilize existing Council and Council subgroup meeting procedures, and the framework provisions of the FMP. Except for automatic actions such as quota closures, the framework provisions require public comment and Council action before management actions are implemented. Safety and weather issues can be considered during the Council process. The USCG has a Council representative who regularly comments on proposed management measures. In addition, the USCG participates on the

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Council's Enforcement Consultants Committee, which is another forum for considering safety and weather issues. The HMS Management Team and Advisory Subpanel also hold public meetings where safety and weather concerns can be raised and addressed. Mitigation measures may be incorporated into pre-season and in-season actions under the framework procedures.

A NMFS regulation at 50 CFR 600.745 applies to any fishing vessel required to carry an observer as part of a mandatory observer program or carrying an observer as part of a voluntary observer program under the Magnuson-Stevens Act, MMPA (16 U.S.C. 1361 et seq.), the South Pacific Tuna Act of 1988 (16 U.S.C. 973 et seq.), or any other U.S. law. Observers may not depart on a fishing trip aboard a vessel that does not comply with United States Coast Guard safety requirements or that does not display a current commercial fishing vessel safety examination decal. All vessels required to carry an observer must meet Coast Guard safety requirements and display a current safety decal (issued within the previous two years). Vessels not meeting these requirements are deemed unsafe for purposes of carrying an observer and must correct deficiencies before departing port. The vessel owner or operator must also allow an observer to visually inspect any safety or accommodation requirement if requested. Observers are required to complete a pre-trip safety check of the emergency equipment and are encouraged to review emergency instructions with the operator before the vessel departs port.

~~6-36.5.6~~ Domestic Annual Harvest (DAH), Total Allowable Level of Foreign Fishing (TALFF), and Domestic Annual Processing (DAP)

The Magnuson-Stevens Act at 16 U.S.C. §1853(a)(4) requires that each fishery management plan assess and specify 1) the capacity and extent to which U.S. fishing vessels, on an annual basis, will harvest the OY from the fishery (DAH); 2) the portion of the OY which, on an annual basis, will not be harvested by U.S. fishing vessels and can be made available for foreign fishing (TALFF); and 3) the capacity and extent to which U.S. fish processors, on an annual basis, will process that portion of the OY that will be harvested by U.S. fishing vessels (DAP). Regulations implementing the Magnuson-Stevens Act at 50 C.F.R. § 600.516 further define the total allowable level of foreign fishing, as—with respect to any fishery subject to exclusive U.S. fishery management authority (i.e., the portion of the fishery that occurs within the U.S. EEZ)—that portion of the OY of such fishery that will not be caught by U.S. vessels.

All species in the management unit of this FMP are highly migratory and range far beyond the EEZ. As presently defined, the OY for each species is based on MSY for the entire stock, both within and beyond the U.S. EEZ. However, the U.S. domestic fleet harvests only a small portion of the OY, and only a small portion of the U.S. harvest is taken in the EEZ. The rest of the U.S. harvest is taken beyond the EEZ.

Presently, no highly migratory species in excess of U.S. harvest capacity are available for foreign fishing (TALFF) in the EEZ. The DAH of HMS from 1995 through 1999 has averaged 24,349 mt (~~HMS FMP FEIS~~ Chapter 2, Table 2-1). During this period, an average of 1,074 vessels landed HMS on the West Coast (~~HMS FMP FEIS~~ Chapter 2, Table 2-64). The amount of fishing gear actually deployed on an annual basis to take management unit species depends on availability of the resource. In all instances, the harvesting capacity of the U.S. fleet along the West Coast exceeds the amount of the resource available in the EEZ.

Similarly, no HMS are available for foreign processing. ~~In Appendix A~~ Chapter 2 of the ~~HMS FMP FEIS~~, ~~the FMP~~ documents the characteristics of 20 HMS communities, including the number of processors/buyers in each area. U.S. processors process fish caught within and outside the EEZ by U.S. vessels, and import additional HMS to meet market demand. Therefore, the capacity and extent of domestic annual processing (DAP) exceeds the amount of HMS harvested by U.S. vessels in the EEZ.

A review of the capacity and extent of domestic annual harvest and processing ~~will be included in the annual SAFE document~~ may be conducted periodically if warranted.

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6.26.6 Fishery-Specific Conservation and Management Measures

~~This section describes the initial fishery-specific management measures when the plan was adopted. The adopted measures for the drift gillnet, longline, and purse seine fisheries. Other HMS fisheries do not have Federal regulations except for general requirements and prohibitions, such as permits and logbooks.~~

~~Management measures may be modified in the future, or new regulations may be implemented, using framework adjustment procedures in the FMP. These measures would stay in effect until revised or removed by specific action.~~

~~The proposed measures are described below specifically for the drift gillnet, longline, and purse seine fisheries only, because of the measures that would affect how those particular fisheries are conducted. On the other hand, the measures proposed for hook and line, harpoon, and recreational fisheries are largely administrative in nature, having to do with permits and logbooks that do not directly affect fishing operations. Management of recreational fishing, moreover, is essentially~~Management of recreational fishing, is mainly deferred to the states in this FMP, reflecting the mainly localized nature of sportfishing issues and values that are best addressed at that level. Although this FMP does have a proposed catch-and-release measure for the recreational fishery that could affect fishing practices, that program would be voluntary.

6.2.16.6.1 Drift Gillnet Fishery Management Measures

Background

The drift large-mesh (14" minimum mesh size) gillnet fishery for swordfish and shark ~~(14" minimum mesh size)~~ is managed under numerous complex and detailed federal and state regulations to protect the populations fished as well as the protected species incidentally taken. These regulations ~~are described in Appendixes B and C to the original FMP FEIS (PFMC 2003), the latter being the California code for fishing swordfish and shark with minimum stretched mesh of 14 inches required. Briefly, the regulations (for 314" stretched mesh only) drift gillnets are as follows~~for large-mesh drift gillnets include:

Federal Regulations

Take Reduction Team (POCTRT) measures In addition ~~to protect marine mammals:~~

- ~~Acoustic deterrent devices (pingers) are~~state permits, a federal HMS permit is required ~~on drift gillnets to deter entanglement of marine mammals.~~
- ~~All drift gillnets must be fished at minimum depth below the surface of 6 fm (10.9 m).~~
- ~~Skipper workshops may be required.~~
- ~~Vessels must provide accommodations for observers when assigned.~~
- ~~Federal Turtle Conservation Closed Areas:~~
- ~~Drift gillnet fishing may not be conducted:~~
 - ~~In the portion of the EEZ bounded by the coordinates 36° 18.5' N latitude (Point Sur), to 34° 27' N latitude, 123° 35' W longitude (off CA); then to 129° W longitude; then north to 45° N latitude (off OR); then east to the point where 45° N latitude meets land (OR), through year 2003 from August 15 to November 15;~~
 - ~~In the portion of the EEZ south of Point Conception, California (34° 27' N latitude) and west to 120° W longitude from August 15 to August 31 and again from January 1~~

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through January 31 during a forecasted or occurring El Niño, as announced by NMFS⁶.

State Restrictions (applicable to vessels operating from the state's ports)

Participation restrictions:

- ~~The California and Oregon limited entry programs for the swordfish/shark drift gillnet fisheries.~~

Gear restrictions ~~(California):~~

- ~~The maximum cumulative length of a shark or swordfish gill net(s) on the net reel of a vessel, on the dock of the vessel, and/or in the water at any time shall not exceed 6,000 ft in float line length, except that up to 250 fm of spare net (in separate panels not to exceed 100 fm) may be on board the vessel stowed in lockers, wells, or other storage.~~
- ~~The use of quick disconnect devices to attach net panels is prohibited.~~
- ~~Drift gillnets must be at least 14 inch stretch mesh.~~
- ~~The unattached portion of a net must be marked by a pole with a radar reflector.~~

Mainland area restrictions/closures:

- ~~Drift gillnets cannot be used:~~

~~———— In the EEZ off California from February 1 to April 30.~~

~~———— In the portion of the EEZ off California within 75 nm of the coastline from May 1 to August 14.~~

~~———— In the portion of the EEZ off California within 25 nm of the coastline from Dec. 15 through Jan. 31.~~

~~———— In the portion of the EEZ bounded by a direct line connecting Dana Point; Church Rock on Catalina Island; and Point La Jolla, San Diego County; and the inner boundary of the EEZ from August 15 through September 30 each year.~~

~~———— In the portion of the EEZ within 12 nm from the nearest point on the mainland shore north to the Oregon border from a line extending due west from Point Arguello.~~

~~———— East of a line running from Point Reyes to Noonday Rock to the westernmost point of southeast Farallon Island to Pillar Point.~~

~~———— In the portion of the EEZ within 75 nm of the Oregon shoreline from May 1 through August 14, and within 1000 fm the remainder of the year.~~

~~———— Off Washington (Washington does not authorize this HMS gear).~~

Channel Islands (California) closures:

- ~~Drift gillnets cannot be used:~~

~~———— In the portion of the EEZ within six nm westerly, northerly, and easterly of the shoreline of San Miguel Island between a line extending six nm west magnetically from Point Bennett and a line extending~~

⁶—A final rule was published December 16, 2003, at 68 FR 69967, changing 50 CFR § 223.206(d) to prohibit fishing during the months of June, July, and August, which NMFS has concluded offers more protection for loggerheads while having less impact on the fishery than a closure in January and August.

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~~six nm east magnetically from Cardwell Point and within six nm westerly, northerly, and easterly of the shoreline of Santa Rosa Island between a line extending six nm west magnetically from Sandy Point and a line extending six nm east magnetically from Skunk Point, from May 1 through July 31 each year.~~

~~— In the portion of the EEZ within 10 nm westerly, southerly, and easterly of the shoreline of San Miguel Island between a line extending 10 nm west magnetically from Point Bennett and a line extending 10 nm east magnetically from Cardwell Point and within 10 nm westerly, southerly, and easterly of the shoreline of Santa Rosa Island between a line extending 10 nm west magnetically from Sandy Point and a line extending 10 nm east magnetically from Skunk Point from May 1 through July 31 each year.~~

~~— In the portion of the EEZ within a radius of 10 nm of the west end of San Nicolas Island from May 1 through July 31 each year.~~

~~— In the portion of the EEZ within six of the coastline on the northerly and easterly side of San Clemente Island, lying between a line extending six nm west magnetically from the extreme northerly end of San Clemente Island to a line extending six nm east magnetically from Pyramid Head from August 15 through September 30 each year.~~

- ~~• The federal Turtle Conservation Closed Areas are based on recommendation from the identified in the Pacific Offshore Cetacean Take Reduction Team (POCTRT or TRT), which was modified by NMFS after considering fishery observer data and recent satellite telemetry tracking data obtained from two leatherback sea turtles that were tagged in Monterey Bay in September 2000; and on existing state restrictions that regulate drift gillnet gear and regulate drift gillnet use in certain times or places. In an effort to minimize the economic impact of the time and area closures, the above “modified” TRT recommendation was developed to provide access to the productive fishing grounds north of Point Conception, which is consistent with the intent of the TRT proposal, while still providing at least an equal, if not greater, level of protection for leatherback and loggerhead sea turtles. In addition, the modified TRT recommendation does not include the lowering of the net to at least 60 feet as recommended by the TRT because observer data (1990-2000) do not suggest that the lengthening of extenders to 60 ft would result in a definite decrease in leatherback interactions. The original *trigger* language identified by the TRT to extend the area closure in a southerly direction to Point Conception if a leatherback was observed was also removed because NMFS did not consider this extra precaution to be necessary based on the distribution of the turtles. Although the TRT recommended 36°15' N latitude as the southern boundary of the closed area, Point Sur was set as the southern boundary because it is a more recognizable landmark and only three miles north of 36°15' N latitude. The diagonal line from Point Sur to 34°27' N latitude, 123°35' W longitude was developed by plotting the satellite tracking data of two leatherback turtles, keeping the southernmost turtle trajectory north of the diagonal line. The reason for this precaution is to protect a potential migratory corridor of leatherbacks departing Monterey Bay for western Pacific nesting beaches. NMFS hopes to learn more about this migratory corridor through additional satellite tag attachments on turtles leaving Monterey Bay, in order to minimize the impact of commercial fisheries on leatherbacks.~~Plan are required.
- ~~• This FMP endorses or adopts in the FMP all a drift gillnet can be no longer than 6,000 ft.~~
- ~~• The gear is prohibited in waters off of Washington. This reflects an existing state of Washington prohibition on the use of drift gillnet gear~~
- ~~• Protected resource area closures include the Pacific Leatherback Conservation Area and the Pacific Loggerhead Conservation Area. The Pacific Loggerhead Conservation Area is effective June, July and August during a forecasted or occurring El Niño event.~~
- ~~• Mainland area closures include a complete closure of the fishery off of California February 1-April 30, within 75 nm May 1-August 14, and within 25 nm December 15-January 31 the following year; and east of a line approximating 1,000 fm off of Oregon~~

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- There are other discrete area closures along the California coast and around the Channel Islands.

Regulations implemented through this FMP reflect federal conservation and management measures in place under the MMPA and ESA; adopts and all state regulations for swordfish/shark drift gillnet fishing under Magnuson-Stevens authority except limited entry programs (which will remain ~~remained~~ under states' authority); modifies an OR closure inside 1000 fm (or way point equivalent) to be in effect year round; closes EEZ waters off WA to all drift gillnet fishers; and continues the current turtle protection closure north of Point Sur, CA to 45° N latitude (August 15 to November 15). During a forecasted or occurring El Niño event (August and January) a specified area south of Pt. Conception to 120° W longitude is closed during June, July and August. The reason for this closure is existing federal and state regulations, including current states' drift gillnet time area closures and gear restrictions (except for an Oregon spring summer closure) were deemed appropriate for adopting intact. However, the). The Council concluded it was premature to federalize the states' limited entry programs, with its increase in federal costs and administrative burdens. Existing time/area closures in federal and state regulations were deemed appropriate for adopting intact. Closures off Washington and Oregon are intended to protect the common thresher shark, sea turtles, and marine mammals.

~~The FMP modifies the current state regulations to prohibit, year round, drift gillnet fishing for swordfish and sharks in EEZ waters off OR east of a line approximating the 1,000 fm curve (deleting the May August prohibition within 75 nm) and prohibits HMS DGN fishing in all EEZ waters off WA. The state of Washington currently does not allow the use of drift gillnet gear and Oregon does not allow drift gillnets to target thresher shark, although DGN vessels have fished off both states and landed their catch in California.~~

6.2.26.6.2 Pelagic Longline Fishery Management Measures

The pelagic longline measures differ according to their application inside or outside the EEZ:

Inside the EEZ:

- ~~This FMP establishes a general prohibition on the~~ The use of pelagic longline gear is prohibited in the EEZ ~~(see also Legal Gear Restrictions Section 6.1.1, with reference to prohibition of longline gear inside the EEZ).~~ This avoids/prevents potential bycatch, protected species, and fishery competition problems by continuing the de facto longline prohibition throughout the EEZ. Proposals for research or an EFP for the use of longline gear under this prohibition will be evaluated when the proposals are submitted, according to EFP guidelines.

~~Proposals for research or exempted fishing permit (EFP) use of longline gear under this prohibition will be evaluated when the proposals are submitted, the latter according to EFP guidelines developed by the HMS management team (see Section 6.1.11, Exempted Fishing).~~

Outside the EEZ:

~~*N.B.: The Council's preferred alternative (Alternative 2) for these measures was disapproved by NMFS. The following measures are pursuant the use of pelagic longline gear to make shallow sets to a December 2003 supplement to the August 2003 FMP FEIS.*~~

~~Measures proposed by the Council for longline fishing in waters west of 150° W longitude are supplemented by NMFS rules under the ESA to impose the same restrictions on longline vessels fishing outside the EEZ but east of 150° W longitude. (N.B.: The text of the December 2003 supplement appears to be in error and is shown corrected). This will result in implementation of all the elements listed below for all fishing on the high seas by West Coast longline fishing vessels.~~

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~~Longline vessels operating on the high seas outside the EEZ would be subject to the same controls that applied to Hawaii-based longline fishing vessels holding longline permits in 2003. These are as follows:~~

- ~~1. Line clippers, dip nets, and bolt cutters meeting NMFS' specifications must be carried aboard each vessel for releasing turtles (specifications vary by vessel size);~~
- ~~2. A vessel may not use longline gear to fish for or target swordfish (*Xiphias gladius*) north of the equator (0° latitude); landing or possession of more than 10 swordfish per trip is prohibited.~~
 - ~~• The length of each float line possessed and used to suspend⁷ A shallow set is defined as one where the deepest point of the main longline beneath a float must be longer than 20 between any two floats, i.e., the deepest point in each sag of the main line, is at a depth less than or equal to 100 m (65.6328.1 ft or 10.954.6 fm) below the sea surface.~~

Regulations consistent with those applicable to vessels fishing under a western Pacific longline limited entry permit in 2003 were implemented for pelagic longline vessels permitted under this FMP.⁸ These include:

- ~~• Area restrictions (in addition to the prohibition on shallow sets): From April 1 through May 31, a vessel may not use longline gear in waters bounded by 0° latitude and 15° N latitude, and 145° W longitude and 180° W longitude; receive fish caught in that area, or land fish caught in that area.~~
- ~~3. No Gear restrictions applicable when fishing west of 150°W longitude and north of the equator: Float lines must be longer than 20 m (65.6 ft or 10.9 fm); the use of light stick (any light emitting device for attaching underwater to the sticks is prohibited; when using conventional longline gear) may be possessed on board a vessel;~~
 - ~~4. When a longline is deployed, no fewer than at least 15 branch lines may between floats must be set attached between any two floats (10 branch lines if using basket gear);~~
 - ~~• Longline gear must be deployed such that; the deepest point of the main longline between any two floats, i.e., the deepest point in each sag of the main line, is at a depth greater than 100 m (328.1 ft or 54.6 fm) below the sea surface; must be deeper than 100 m at its deepest point. When using basket-style longline gear at least 10 branch lines must be must be attached between any two floats.~~
 - ~~5. While fishing for management unit species north of 23° N latitude, a vessel must:~~
 - ~~• Maintain a minimum of two cans (each sold as 0.45 kg or 1 lb size) containing blue dye Limits on board the vessel during a fishing trip;~~
 - ~~• Use completely thawed bait to fish for Pacific pelagic management unit species;~~
 - ~~• Use only bait that is dyed blue of an intensity level specified by a color quality control card issued by NMFS;~~
 - ~~• Retain sufficient quantities of offal for the purpose of discharging the offal strategically in an appropriate manner;~~
 - ~~• Remove all hooks from offal prior to discharging the offal;~~

⁷ Originally the FMP would have allowed the use of longline gear to target swordfish with shallow sets east of 150°W longitude and north of the equator. However, as a consequence of the ESA section 7 consultation for the FMP, the use of shallow sets to target swordfish was prohibited in all waters beyond the EEZ (in addition to the general prohibition on the use of pelagic longline gear inside the West Coast EEZ). This prohibition does not apply to vessels fishing under a western Pacific longline limited entry permit.

⁸ At the time the FMP was drafted the use of shallow-set longline to target swordfish was prohibited for vessels fishing under a western Pacific longline limited entry permit. Selected measures, including this prohibition, would have applied to the pelagic longline fishery authorized under this FMP for vessels fishing west of 150°W longitude and north of the equator. However, the prohibition on using shallow sets to target swordfish by vessels fishing under a western Pacific longline limited entry permit was lifted in 2004 with measures to mitigate take and mortality of ESA-listed sea turtles.

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- ~~Discharge fish, fish parts (i.e., offal), or spent bait while setting or hauling longline gear on the opposite side of the vessel from where the longline is being set or hauled;~~
- ~~Use a line setting machine or line shooter to set the main longline (unless using basket gear);~~
- ~~Attach a weight of at least 45 g to each branch line within 1 m of the hook;~~retention and
- ~~Remove the bill and liver of any swordfish that is landing of incidentally caught, sever its head from the trunk and cut it in half vertically, and periodically discharge the butchered heads and livers overboard on the opposite side of the vessel from which the longline is being set or hauled swordfish apply.~~
- 9. Sea turtle mitigation measures including equipment, handling and resuscitation methods, and training are required.
- Seabird mitigation measures including equipment, handling and resuscitation methods, and training are required.
- ~~Other measures⁹ for the proper release and handling of turtles and seabirds, the requirement for vessel operators to attend a protected species workshop each year, and the requirement for Vessel Monitoring Systems (VMS). VMS is required because the proposed action involves area specific regulations. may apply.¹⁰~~

~~6.2.3 Purse Seine Fishery Management Measures~~

~~These measures pertain to the small purse seine vessels (<364 mt carrying capacity) fishing HMS.~~

~~This FMP opens the entire EEZ to purse seine fishing. With few data to suggest any potential harmful bycatch or gear conflicts, this action provides additional opportunity for purse seiners to fish for bluefin tuna in those years when they travel in fishable schools off Oregon and Washington, and could raise a potential for purse seining for albacore in the northwest portion of the EEZ.~~

~~Purse seine fishers targeting HMS from any state can fish anywhere in the EEZ, although there has been little interest in such fishing off Oregon and Washington.~~

~~6.2.4 Prohibit Sale of Certain Species (No-sale Marlin Provision)~~

~~This FMP prohibits the sale of striped marlin by vessels under PFMC jurisdiction.~~

Rationale: ~~Greater regional and national net benefits are obtained from continuing coast wide under federal authority the long standing, traditional policy (California) of reserving this species for sport use only.~~

~~Striped marlin is considered to have far greater value as a recreational rather than commercial target species, and is only available seasonally. Prohibiting its sale removes the incentive for its taking by commercial fishers.~~

~~6.2.5 Permits~~

~~Permits are a standard tool used in virtually all fishery management plans to support management by:~~

- ~~enhancing or facilitating collection of biological, economic or social data.~~
- ~~facilitating enforcement of laws and regulations.~~
- ~~identifying those who would be affected by actions to prevent or reduce excess capacity in the~~

⁹ ~~Full description of all applicable measures are in 50 CFR Part 660, see 66 FR 63630 (turtles) and 67 FR 34408 (seabirds).~~

¹⁰ ~~Full description of all applicable measures are in 50 CFR Part 660, see 66 FR 63630 (turtles) and 67 FR 34408 (seabirds).~~

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~~fishery.~~

- ~~• providing information to meet international obligations.~~

~~A special kind of permit is for limited entry into a fishery. However, no limited entry systems are proposed at this time. Implementation of a limited entry program would require a plan amendment. The Council adopted a control date of March 9, 2000 for commercial and charter fisheries for HMS, in anticipation that a limited access program may be needed in the future.~~

Commercial Permits

~~This FMP requires a federal permit for HMS vessels with a specific endorsement for each gear type (harpoon, drift gillnet, surface hook and line, purse seine, and pelagic longline). The permit is to be issued to a vessel owner for each specific fishing vessel used in commercial HMS fishing. This action is a practical procedure for tracking and controlling, by permits, commercial HMS fishing activities and the effects of regulations on those activities.~~

~~Regulations implementing the FMP establish the permitting system and set the terms and conditions for issuing a permit. Initially, there will be no qualification criteria, such as minimum amount of landings, to obtain specific gear endorsements. Any commercial fisher may obtain the required gear endorsements. The permits and endorsements are subject to sanctions, including revocation, as provided by Section 308 (g) of the Magnuson-Stevens Act. Permit requirements could be changed in the future under the framework procedures (Section 5.1). This permit program would not eliminate existing state permit or licensing requirements, or federal permits under the High Seas Fishing Compliance Act.~~

Recreational Permits

~~This FMP requires a federal permit for all commercial-passenger recreational fishing vessels (CPFV) that fish for HMS, but an existing state permit or license for recreational vessels could meet this requirement. The Council will, however, request states to incorporate in their existing CPFV permit systems an allowance for an HMS species endorsement on the permits so that statistics could be gathered on that segment of the HMS fishery. This action is a practical procedure for tracking and controlling, by permits, recreational HMS fishing activities and the effects of regulations on those activities.~~

6.2.6 Reporting Requirements

~~The Magnuson-Stevens Act requires that FMPs specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, and charter fishing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors (Sec. 303(a)(5)).~~

~~Catch, effort, and catch disposition data are critical for monitoring the fisheries, assessing the status of the stocks and fisheries, and evaluating the effectiveness of management. Data necessary for management of HMS have not been regularly or fully collected by state, federal and international agencies under existing provisions. HMS reporting requirements for basic catch effort and bycatch are inconsistent among the states and the federal government and do not cover all HMS fisheries operations or do not collect all data needed for stock and fishery monitoring. The NMFS requires logbooks under the High Seas Fishing Compliance Act for all vessels fishing outside the U.S. EEZ (purse seine, surface hook and line, longline) and the formats of the logs are tailored to the fishery specific needs. But the logbook requirements do not extend to fisheries in the EEZ. Logbooks are required for specific fisheries by non-federal authorities: the IATTC (purse seine, baitboat), California (drift gillnet, harpoon, charter/party), Oregon (developmental gillnet,~~

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~~developmental longline). No other HMS reporting requirements exist in Washington or Oregon (although voluntary logbooks for various HMS fisheries are accepted).~~

~~Current estimates indicate catch, effort and bycatch data are not captured for approximately 72% of the surface hook and line vessels fishing in the U.S. EEZ and an unknown percentage of the charter/party vessels operating from Oregon and Washington ports. In 2000, 28% of the estimated 710 surface hook and line vessels fishing in the EEZ submitted logbooks. Currently 77% of the charter/party vessels coast-wide submit logbooks. The remainder of the HMS fisheries report catch and effort and bycatch data in one format or another to some collecting authority with approximately 100% reporting rate. Not all currently collected data are available to PFMC on a timely basis or in a detailed format making contemporary monitoring of some HMS stocks and fisheries difficult or problematic. Bycatch/incidental catch reporting is not consistent among fisheries and will need revision upon adoption of this FMP. PacFIN does not capture catch and effort data (allowing CPUE to be estimated), which is fundamental for stock assessment and monitoring and needed for preparation of SAFE documents.~~

~~All three states have far offshore fishery regulations that require fishers to declare when they plan to fish on the high seas. These fishers are then allowed to fish outside the EEZ, but cannot fish inside the EEZ during the same trip. All three states have exceptions for albacore troll vessels. The FMP does not propose federal regulations addressing declarations, because the state requirements are adequate.~~

~~This FMP requires all commercial and recreational party or charter/CPFV fishing vessels to maintain and submit logbooks to NMFS. State or existing federal logbooks could meet this requirement as long as essential data elements are present, and data are available to NMFS subject to a data exchange agreement. Authorizes adjustment of reporting requirements under a framework process. This action is a practical procedure for obtaining commercial (including CPFV) catch and effort data for a standardized NMFS data base on West Coast fisheries.~~

- ~~• The operator of any commercial fishing vessel and any charter vessel fishing for HMS is required to maintain on board an accurate and complete record of catch, effort and other data on logbook forms provided by NMFS or a state agency. The original logbook form for each day of the fishing trip must be submitted to either the Southwest Regional Administrator of NMFS or the appropriate state management agency. Existing state or federal logbook forms may be used. These include logbooks required by: 1) the Tuna Conventions Act, the FMP for Pelagic Fisheries of the Western Pacific Region, the High Seas Fishing Compliance Act, and any logbook required by California, Oregon or Washington. These logbook forms can be found in the HMS FMP FEIS (PFMC 2003), Appendix D. Information required to be submitted on logbooks may be revised in the future. Existing state reporting requirements, including those for landing receipts, would remain in effect.~~VMS: Eligible units are specified and must be deployed at the direction of NMFS.

~~6.2-36.6.3~~ *Purse Seine Fishery Management Measures*

These measures pertain to the small purse seine vessels (< 364 mt carrying capacity) fishing HMS.

This FMP opens the entire EEZ to purse seine fishing. -With few data to suggest any potential harmful bycatch or gear conflicts, this action provides additional opportunity for purse seiners to fish for Pacific bluefin tuna in those years when they travel in fishable schools off Oregon and Washington, and could raise a potential for purse seining for albacore in the northwest portion of the EEZ.

Purse seine fishers targeting HMS from any state can fish anywhere in the EEZ, although there has been little interest in such fishing off Oregon and Washington.

...

8.0—Research and Data Needed for Management

~~There is substantial uncertainty on the status of stocks and estimates of MSY for many HMS species. Basic biological and life history data are unknown for some species, and understanding of distribution, abundance, and reproductive behaviors of most is poor. There is insufficient understanding of stock structures relative to the extent of fisheries, on the interchange between stocks, and on survival and fecundity schedules for investigating exploitation effects and species' resiliency to exploitation. Total catch data may be inaccurate for some species, because of unreported catch by international fisheries, or unreported bycatch. There is lack of fishery independent indexes of abundance.~~

~~More complete catch information and data on interactions with protected and prohibited species are needed for most fisheries. Data collection and reporting requirements are inconsistent between state and federal regulations. There is inadequate understanding of the fisheries on some HMS stocks that are shared with Mexico (e.g., species composition of shark catches in Mexican fisheries), and inadequate data exchange with Mexico.~~

~~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. More work is also needed to investigate the hooking survivorship of protected species, such as turtles and seabirds, that are caught incidentally in HMS fisheries.~~

~~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 EFHs and to identify specific habitat areas of particular concern (HAPC), such as pupping grounds, key migratory routes, feeding areas, and where adults aggregate for reproduction. A special need is to determine the pupping areas of thresher and mako sharks, which are presumed to be within the southern portion of the U.S. West Coast EEZ, judging from the occurrence of post partum and young pups in the area (e.g., NMFS Driftnet Observer data).~~

~~For sharks, the size/age groups contributing most to population growth and maintenance need to be determined by demographic studies to better determine how best to apply management measures, such as season and area closures, and 'slot' size limits. Additionally, the U.S. Congress identified the following data needs for sharks in the Shark Finning Prohibition Act (PL 106-557) (see also the U.S. National Plan of Action for Sharks):~~

- ~~• The collection of data to support stock assessment of shark populations subject to incidental or directed harvesting by commercial vessels, giving priority to species according to vulnerability of the species to fishing gear and fishing mortality, and its population status.~~
- ~~• Research to identify fishing gear and practices that prevent or minimize incidental catch of sharks in commercial and recreational fishing.~~
- ~~• Research on fishing methods that will ensure maximum likelihood of survival of captured sharks after release.~~
- ~~• Research on methods for releasing sharks from fishing gear that minimize risk of injury to fishing vessel operators and crews.~~

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- ~~• Research on methods to maximize the utilization of, and funding to develop the market for, sharks not taken in violation of a fishing management plan approved under the Magnuson-Stevens Act.~~
- ~~• Research on the nature and extent of the harvest of sharks and shark fins by foreign fleets and the international trade in shark fins and other shark products.~~

8.1 Information Needs by Species

The following information needs have been identified. They are to obtain better fundamental information, like on reproductive and feeding habits, and distribution and abundance. There is a need to determine:

Albacore Tuna

- ~~• Whether there are multiple sub-stocks with differently migrating juveniles or juveniles from different spawning localities with different migration routes and timetables.~~
- ~~• How deep-dwelling adults migrate and are distributed in the north Pacific by season and age, including in the West Coast EEZ.~~
- ~~• How ENSO and decadal oceanographic changes affect stock production and the east-west migrations of juveniles.~~
- ~~• Whether certain prey species are key for survival and reproductive success.~~

Bigeye Tuna

- ~~• How deep-dwelling adults migrate and are distributed by season and age in the Pacific.~~
- ~~• Significance of floating object and other species associations in bigeye life history.~~
- ~~• How ENSO/decadal oceanographic changes affect stock production and recruitment success.~~
- ~~• Whether certain prey species are key for survival and reproductive success.~~

Skipjack Tuna

- ~~• The significance of floating object and other species associations in skipjack life history.~~
- ~~• How ENSO/decadal oceanographic changes affect production and recruitment.~~
- ~~• How the very large skipjack catch in the western Pacific is affecting the pelagic community.~~
- ~~• Whether certain prey species are key for survival and reproductive success.~~

Bluefin Tuna

- ~~• How adult bluefin migrate and are distributed by season and age in the North Pacific, including in the West Coast EEZ.~~
- ~~• How stock abundance can most reliably be measured.~~
- ~~• How ENSO/decadal oceanographic changes affect production, recruitment, and east-west migrations.~~
- ~~• Whether certain prey species are key for survival and reproductive success.~~

Yellowfin Tuna

- ~~• How yellowfin migrate and are distributed by season and age in the Pacific.~~
- ~~• How ENSO/decadal oceanographic changes affect yellowfin production and recruitment.~~

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- ~~The significance of floating object and other species associations in yellowfin life history.~~
- ~~Whether certain prey species are key for survival and reproductive success.~~

Common Thresher Shark

- ~~The stock structure and boundaries of this species; the relationship to populations to the south and west.~~
- ~~The extent of pupping and nursery grounds off northern Mexico, and their relationship to those of southern California.~~
- ~~The pattern of seasonal migrations for feeding and reproduction, and where and when life stages may be vulnerable.~~
- ~~Aging and growth rate, including validation.~~

Shortfin Mako Shark

- ~~Distribution, abundance, size, and catch distribution of shortfin mako to the south and west of the U.S. EEZ; relative importance of the nursery areas off southern California.~~
- ~~Pupping areas off southern California and northern Mexico, and whether any are critical for stock health.~~
- ~~Importance of the high seas habitat and the dispersal and migratory patterns of adults.~~
- ~~Age and growth of this species (current growth estimates differ widely).~~

Blue Shark

- ~~Survival rate of discarded longline caught blue sharks.~~
- ~~Total regional catches by sex and size (unknown because of high discard rate).~~
- ~~Movements of maturing fish from the EEZ to the high seas, comparing size composition of catches inside the EEZ and beyond.~~

Swordfish

- ~~How swordfish can be caught with greatly reduced take of protected species.~~
- ~~How swordfish are distributed by season and age in the outer EEZ and beyond, and whether there could be better fishing strategies.~~
- ~~Age and growth of west coast caught swordfish.~~

Striped Marlin

- ~~Nature and degree of exchange or isolation of the U.S./Mexico population with populations to the south and west (stock structure).~~
- ~~How the seasonal migration into southern California waters differs by size, age, and sex (archival tagging).~~
- ~~Age and growth of fish sampled from the eastern Pacific.~~

Dorado

- ~~Stock structure of eastern Pacific population.~~

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- ~~The catches in the eastern Pacific, including from artisanal fisheries.~~
- ~~The importance of floating objects to this species according to age, sex, and reproductive state, comparing associated and non-associated fish (archival tagging).~~

8.2 Information Needs by Fishery

There is a need to determine, in priority order of need (not of fisheries):

Drift Gillnet

- ~~Size composition of bycatch species.~~
- ~~Adequacy of catch sampling by observers are enough samples being collected given variability?~~
- ~~Dressed weights of individually landed fish (weight of entire catch is presently entered on fish tickets)~~

Surface Hook and Line (troll)

- ~~Total catch information (including incidental and bycatch) by vessel.~~
- ~~The extent of protected species interactions in this fishery (thought to be low).~~
- ~~Mortality of fish released in this fishery.~~

Pelagic Longline

- ~~The size and species composition of the primary catch.~~
- ~~Extent and composition of bycatch and of protected species interactions and resulting impacts on populations; distribution, abundance and movements of protected species.~~
- ~~How protected species takes can be reduced and survivability increased with new techniques and gear modifications. Effectiveness of the conservation measures adopted from the Hawaii-based longline fishery in the area fished by the West Coast longline fleet.~~
- ~~Economic factors (for RIR and RFA analysis).~~

Harpoon

- ~~Accurate catch composition taken exclusively by harpoon (California landings data, drift gillnet catches, are sometimes mixed with the Harpoon/Spear category when fishers hold multiple gear permits).~~
- ~~Length and weight data for individual swordfish (including estimates for fish struck but escaped).~~
- ~~Economic factors (for RIR and RFA analysis).~~

Coastal Purse Seine

- ~~Extent and composition of bycatch and protected species interactions, and the mortality rates.~~
- ~~Size, sex, and maturity composition of bluefin in catch.~~
- ~~Economic factors (for RIR and RFA analysis).~~

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~~Recreational–Party/Charter Vessels~~

- ~~• Complete catch composition and logbook information on a coast wide basis (CA/OR/WA).~~
- ~~• Protected species interactions, including depredation by sea lions and survival of hooked birds, and evaluation of the adequacy/accuracy of logbook entries.~~
- ~~• Bycatch on a coast wide basis and evaluation of adequacy/accuracy of information from logbooks and the MRESS.~~
- ~~• Economic factors (for RIR and RFA analysis).~~

~~Recreational–Shore and Private Vessels~~

- ~~• Ways to adequately sample private vessels utilizing marinas.~~
- ~~• Ways to determine the bycatch and protected species interactions by such private vessels.~~
- ~~• Ways to sample the recreational catch for length and weight of fish caught to be able to convert catches reported in numbers to catches by weight.~~
- ~~• Economic factors (for RIR and RFA analysis).~~

8.3–General Information Needs

~~EFH~~

- ~~• Very little is known about the habitat of different life stages of most highly migratory species that are not targeted.~~
- ~~• Little is known about the environmental effects of mid water trawling and of the processing of discards.~~
- ~~• Need to identify pupping grounds of common thresher sharks and shortfin mako sharks. Areas where pregnant females congregate may be sensitive to perturbation, and the aggregated females and pups there may be vulnerable to fishing.~~

~~PacFIN Data Issues~~

~~There are significant errors in gear codes of existing PacFIN data, and there is a need for finer resolution of California, Oregon, and Washington gear codes associated with HMS landings. Specific recommendations are:~~

~~Problem: Landings reported under incorrect gear codes.~~

~~Solution: Minimize inaccurate reporting on HMS fish tickets by eliminating defunct gear codes and by discouraging the use of dealers’ knowledge of vessels to designate gear type. These concerns should be addressed through the states’ fish ticket systems, and may require newly designed, or redesigned, fish tickets that more precisely identify HMS gears. California tickets to which this might apply include: (1) northern, central and southern hook and line; (2) central and southern gillnet and harpoon; and, (3) pelagic species.~~

~~Problem: Drift gillnet landings reported under both specific and lumped gear categories.~~

~~Solution: Recommend CDFG provide “corrected” drift gillnet fishery landings (using a filtering process) to PacFIN that include drift gillnet catches previously lumped under the general “entangling net” (60) and “other gear” (0) categories. Currently, PacFIN data for the drift gillnet fishery reflect only those landings~~

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~~that were assigned to gear code 65 (drift gillnet), and do not consider drift gillnet landings that were assigned to gear code 0 (unknown gear) or, more importantly, to gear code 60 (the general gillnet category, “entangling net”).~~

~~Problem: Historical drift gillnet landings data contain errors stemming from inconsistent reporting of data processing practices.~~

~~Solution: To the extent possible, generate a “correct” record of historical drift gillnet landings.~~

~~Problem: Longline landings are lumped so impossible to separate out pelagic longline data.~~

~~Solution: Request that California delineate a drift/pelagic longline gear on HMS fish tickets, using a PacFIN gear code (GRID) created for drift/pelagic longline gear. Lately there has been increased interest in West Coast HMS species by pelagic longline vessels. A distinct pelagic longline gear code would accommodate landings by these vessels.~~

~~To the extent possible, generate a “correct” record of historical, pelagic longline landings.~~

~~Problem: Inability to differentiate CA coastal purse seine landings from distant water purse seine landings.~~

~~Solution: Request that the states and PacFIN distinguish between HMS purse seine landings by distant water tuna vessels (U.S. tropical tuna purse seine fleet) and HMS purse seine landings by California coastal vessels. The distinction is important for socioeconomic impact analyses, Regulatory Flexibility Analysis and potential quota allocations between fleets. To the extent possible, generate a “correct” record of historical purse seine landings of tropical tunas, bluefin and albacore, by purse seine gear type.~~

~~Problem: Inability to separate salmon from albacore effort/landings for OR and WA.~~

~~Solution: Develop distinct salmon and albacore troll gear codes for Oregon and Washington fish tickets.~~

~~To the extent possible, generate a “correct” record of historical albacore and salmon landings, by species troll type.~~

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1.0 Introduction

1.1 Purpose of This Document

The FMP includes important species of tunas, billfish and sharks which are harvested by West Coast HMS fisheries. A complete list of species in the management unit is provided in Chapter 3. The FMP is intended to ensure conservation and promote the achievement of optimum yield of HMS throughout their ranges, both within and beyond the U.S. Exclusive Economic Zone (EEZ), to the extent practicable. Effective conservation and management in most cases will require concerted U.S. and international action. The FMP may serve as a vehicle for fulfilling the West Coast portion of U.S. obligations under international conservation agreements, if domestic U.S. implementing legislation authorizes its use.

The FMP has been amended three times. Amendment 1, approved in 2007, addresses overfishing of bigeye tuna, a management unit species. Amendment 1 also reorganized the FMP, which in its prior form was combined with the Final Environmental Impact Statement evaluating the effects of its implementation. The reorganized FMP is a more concise document containing those elements required by the Magnuson-Stevens Fishery Conservation and Management Act describing the management program. Amendment 2, approved in 2011, made FMP provisions (principally in Chapters 3-5) consistent with the revised National Standard 1 Guidelines (50 CFR 600.310) adopted pursuant to the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. Amendment 3, adopted in 2015, added a suite of lower trophic level species to the FMP's list of ecosystem component (EC) species. Consistent with the objectives of the Council's FMPs and its Fishery Ecosystem Plan, Amendment 3 prohibits future development of directed commercial fisheries for the suite of EC species shared between all four FMPs ("Shared EC Species") until and unless the Council has had an adequate opportunity to both assess the scientific information relating to any proposed directed fishery and consider potential impacts to existing fisheries, fishing communities, and the greater marine ecosystem.

This FMP is a "framework" plan, which includes some fixed elements and a process for implementing or changing regulations without amending the plan (flexible measures). Ongoing management of highly migratory species, and the need to address new issues that arise, make it impossible to foresee and address all regulatory issues in the initial plan. Some framework adjustments can be implemented more quickly than plan amendments, allowing for more timely management response. Changes to any of the fixed elements in the plan require a plan amendment. The framework procedures are described in Chapter 5.

This document also specifies the initial management measures, which are implemented through federal regulations affecting one or more fisheries for highly migratory species. They may be modified in the future, or new regulations may be implemented, using the framework adjustment procedures in the plan.

This FMP provides the vehicle to address issues of regional, national and international concern. The conservation community has raised concerns about the status of HMS, essential fish habitat, and bycatch of fish and capture of protected species in HMS fisheries. International and U.S. policies reflect these concerns. The 1995 Agreement on Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks provides that nations will cooperate in regional management bodies to establish and ensure compliance with conservation measures for HMS. The 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, adopted by the Food and Agriculture Organization of the United Nations (FAO), requires nations to maintain a registry of authorized vessels fishing on the high seas and ensure that such vessels are marked for identification and that they report sufficient information on their fishing activities. The High Seas Fishing Compliance Act is the domestic legislation enacted in 1995 to implement the FAO Agreement. The FAO

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also was the forum for the negotiation of a non-binding “Code of Responsible Conduct of Fisheries” which establishes principles for national and international fishery management. The final text of this code was negotiated in September 1995 and the NMFS has completed an implementation plan for the U.S. In 1999, the FAO adopted an International Plan of Action for the Conservation and Management of Sharks, which encourages nations to assess the status of shark stocks within their EEZs and those fished on the high seas. The U.S. has developed a National Plan of Action for conservation and management, and an FMP can help by focusing research and data collection efforts to support the National Plan. Within the U.S., the Magnuson-Stevens Act requires councils to describe and identify essential fish habitat, minimize to the extent practicable adverse effects on habitat caused by fishing, and identify other actions to encourage conservation and enhancement of habitat. The Act requires that conservation and management measures, to the extent practicable, minimize bycatch and to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. Finally, the Marine Mammal Protection Act, Endangered Species Act and Migratory Bird Treaty Act provide protections for special resources. An FMP serves as a mechanism to address these critical issues in an open process and with the advice of all concerned.

This FMP provides a basis to increase investment in research, data collection and stock assessments for Pacific HMS. Knowledge of stock status is quite limited for many species. Increased funding is necessary to make sure that overfishing is prevented and that sustainable yields are provided for the long term. An FMP also can help to make sure that fishery data gaps and inconsistencies for HMS are addressed.

This FMP provides a mechanism for collaboration with the other Pacific area councils to achieve more consistent management of fisheries which harvest stocks in common. In particular, this FMP could facilitate coordinating management of Hawaii-permitted pelagic longline vessels that make landings on the West Coast and West Coast-based pelagic longliners. Also, the councils and the NMFS science centers in both regions could work together in the preparation of stock assessment and fishery evaluation (SAFE) reports on a regular basis. The councils should receive consistent scientific advice concerning the status of stocks which vessels from the different council areas harvest in common.

1.2 How This Document is Organized

This FMP is organized in seven chapters and several appendices:

- Chapter 1 (this chapter) describes the rationale for HMS management and provides background information on the management context.
- Chapter 2 describes the management philosophy, recognizing the international nature of HMS management, and lists the goals and objectives of the FMP.
- Chapter 3 describes the species in the management unit, including ecosystem component (EC) and prohibited species.
- Chapter 4 describes the framework for determining management thresholds, control rules for management, measures to prevent overfishing and rebuild overfished stocks, and the contents of the SAFE document.
- Chapter 5 describes the process for periodically modifying applicable harvest specifications and management measures. This FMP is a framework plan, meaning that most management measures may be changed through regulatory action without a need to amend the FMP.
- Chapter 6 describes general management measures that may be used to manage West Coast HMS fisheries. Many of these measures can be changed through the management framework described in Chapter 5 allows management measures to be adopted and adjusted to address ongoing conservation concerns. This chapter also describes required specifications for any foreign fishing in the West Coast EEZ targeting HMS. Currently, HMS within the West Coast EEZ are considered fully utilized and no foreign fishing is permitted.

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- Chapter 7 describes essential fish habitat (EFH) for HMS, fishing and non-fishing effects on this EFH and mitigation measures that may be applied.

Material from the original combined FMP and final environmental impact statement, published in August 2003 as part of the FMP implementation process is available on the Council’s website. This material does not describe the management framework or Council HMS management policies and procedures and only supplements the required and discretionary provisions of the FMP described in §303 of the Magnuson-Stevens Act.

1.3 Application of Federal Authority

The management unit in this FMP consists of highly migratory species and their associated fisheries which occur within the West Coast EEZ and on the high seas with the catch being landed on the West Coast. This is consistent with National Standard three of the MSFCMA, which requires that “To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.” It also is consistent with Section 102 of the Act which states that, “The United States shall cooperate directly or through appropriate international organizations with those nations involved in fisheries for highly migratory species with a view to ensuring conservation and shall promote the achievement of optimum yield of such species throughout their range, both within and beyond the exclusive economic zone.”

This FMP applies to all U.S. vessels that fish for management unit species within the EEZ off California, Oregon, or Washington. This FMP also applies to U.S. vessels that fish for management unit species on the high seas (seaward of the EEZ) and land their fish in California, Oregon or Washington. However, pelagic longline vessels that are registered for use under a Western Pacific longline limited entry permit and fish on the high seas and land their fish in California, Oregon, and Washington are also subject to regulations promulgated pursuant to the WPFMC’s Pelagic Fishery Ecosystem Plan (50 CFR 665 Subpart F) whether they make landings on the West Coast or areas under the WPFMC’s jurisdiction (Hawaii, American Samoa, Guam, Northern Mariana Islands).

The FMP does not apply to U.S. vessels that fish for management unit species on the high seas and land into a non-U.S. port. However, those vessels are subject to the requirements of the High Seas Fishing Compliance Act (HSFCA, 16 U.S.C. 5501 et seq.), including permit and reporting requirements.

U.S. vessels that fish for tuna and associated species in the eastern tropical Pacific Ocean also may be subject to management measures under the Tuna Conventions Act (16 U.S.C. 951 et seq.), which implemented the agreement that established the Inter-American Tropical Tuna Commission. There also is the potential for regulations to be promulgated in the future pursuant to other international arrangements such as the U.S.-Canada Albacore Treaty. Section 1.6 provides more information about the relationship of fishery management under this FMP with fishery management under international arrangements.

The application of federal authority as described above promotes the achievement of many of the objectives of the FMP (Section 2.2), including:

- Ensure or contribute to international cooperation in the long-term conservation and sustainable use of highly migratory fish stocks that are caught by West Coast-based fishers.
- Promote inter-regional collaboration in management of fisheries for species which occur in the Pacific Council’s managed area and other Councils’ areas.
- Promote effective monitoring and enforcement.
- Establish procedures to facilitate rapid implementation of future management actions, as necessary.
- Ensure that fisheries are in compliance with laws and regulations to conserve and restore species listed

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pursuant to the ESA, MMPA and MBTA.

This application of authority is appropriate for the following reasons:

- To ensure consistent application of conservation and management measures applying to U.S. fishers on the high seas under other FMPs (e.g., Hawaii longline restrictions);
- To implement measures adopted by international management organizations in which the U.S. participates; if authorized by domestic U.S. implementing legislation;
- To promote consistent and coordinated data collection and management throughout the range of HMS; and
- To promote cooperative and reinforcing management of U.S. HMS fisheries throughout the Pacific such that vessels cannot avoid conservation requirements simply by relocating their operations.

1.4 Complexity of HMS Management

HMS management presents formidable challenges, particularly in the Pacific area. There are numerous species of tuna, billfish, oceanic sharks, and other species which that throughout vast areas of the Pacific Ocean. Knowledge of stock distribution and status is limited. There is a moderate amount of information for the commercially important tunas, lesser amounts for swordfish and other billfishes, and scant information for sharks and other highly migratory fishes. Regular and comprehensive stock assessments are needed for certain species. These species are harvested by numerous coastal and distant-water fishing nations throughout the Pacific. The FEIS for this FMP (PFMC 2003, Chapter 2 Section 2.6) documents 36 nations harvesting HMS in the Pacific. United States fisheries harvest HMS in the EEZ of the U.S., in the EEZs of other nations and on the high seas.

The two principal regional fishery management organizations (RFMOs) responsible for conservation in the Pacific are the Inter-American Tropical Tuna Commission (IATTC) and the Western and Central Pacific Fishery Commission (WCPFC). The treaties establishing these RFMOs give them wide scope to manage and conserve HMS and other organisms caught in HMS fisheries, but principally they manage fisheries for tropical tunas (yellowfin, skipjack, and bigeye), temperate tunas (Pacific bluefin and North Pacific albacore), and certain billfish (swordfish) in their convention areas. Increasingly, RFMOs are adopting measures dealing with non-target species including sharks, billfish, and various non-fish species (sea turtles, marine mammals, seabirds). Member nations, including the U.S., are obligated to implement these measures for their national fisheries.

In 1981, the United States and Canada signed the Treaty on Pacific Coast Albacore Tuna Vessels and Port Privileges, which permits fishing vessels of each nation to fish for albacore tuna in waters of the other nation beyond 12 miles. Recently, U.S. albacore fishermen became concerned about the increased effort by Canadian vessels in U.S. waters and the lack of information on the amount of albacore taken by Canadian vessels. The U.S. and Canada have agreed to Treaty changes to resolve these issues. See section 1.6.2 for more information on this issue.

Within the U.S., HMS fishery management in the Pacific area is the responsibility of three regional fishery management councils, the Western Pacific Fishery Management Council (WPFMC), North Pacific Fishery Management Council (NPFMC), and the PFMC, and the adjacent states. Coordination among councils is desirable, because fishers from the different council areas are harvesting the same stocks of HMS, and in some cases are fishing in the same areas, but landing in different locations. Prior to implementation of the FMP, West Coast-based fisheries for HMS were mainly managed by the states of Washington, Oregon and California, in concert with relevant federal laws. These federal statutes include the High Seas Fishing Compliance Act, Tuna Conventions Act, Marine Mammal Protection Act, Migratory Bird Treaty Act and

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Endangered Species Act. The lack of a single FMP covering all U.S. vessels in the Pacific created a situation where U.S. vessels fishing on the high seas could be subject to different regulations, depending on where they started their trip or where they landed. This created inequities and frustrated achievement of management goals. In addition, foreign vessels and U.S. vessels were often subject to different regulations.

At the time of FMP implementation, HMS were harvested by five major West Coast-based commercial fisheries and various recreational fisheries. Commercial fisheries include surface hook-and-line, pelagic drift gillnet, pelagic longline, purse seine and harpoon. These fisheries operate in the West Coast EEZ, in state waters, and on the high seas. Anglers pursue HMS from commercial passenger fishing vessels as well as private boats. There are sport fisheries targeting albacore, mixed tunas and dorado, billfish, and sharks. At the time of FMP adoption, there were no quotas or allocations among gear groups. User conflicts occurred, particularly in California, where state regulations prohibited longlining within 200 miles and controlled time and area for the drift gillnet fishery.

The recreational community, particularly in southern California, has been concerned about the status and availability of tunas, billfish, and sharks and the impacts of the commercial fisheries on the recreational fisheries for these species. Anglers have opposed a longline fishery in the EEZ off California targeting tunas and swordfish. They are concerned about increased fishing mortality and commercial effort in general and increased bycatch of striped marlin, sharks and other species.

In addition, a growing conservation community is concerned about the management of HMS, including sharks, which are particularly vulnerable to overexploitation. This community also is concerned about increasing bycatch and bycatch mortality of HMS and other fish, and protected species. Longline and drift gillnet gears targeting HMS also capture protected species such as marine mammals, seabirds and turtles.

1.5 History of the Fishery Management Plan

The Pacific Council was created in 1976 pursuant to the Magnuson-Stevens Act, and began to develop FMPs for all of the major fisheries in its area of authority, including a draft FMP for billfish (including swordfish) and oceanic sharks (PFMC 1981). At that time, tunas were not included in the Magnuson-Stevens Act and thus could not be managed by councils. The draft billfish FMP and several others were not adopted by the Council, because it became clear that federal management of all West Coast fisheries was not necessary nor cost-effective. With limited resources, the Council decided to concentrate its efforts on those which required federal management, such as salmon and groundfish. In the case of billfish and oceanic sharks, the Council concluded that effective stock conservation required international management efforts and that there was little the Council could accomplish. The fishery management problems were primarily in California, and the State was addressing these problems.

In 1990, the Pacific States Marine Fisheries Commission (PSMFC) adopted an interjurisdictional fishery management plan for thresher shark (PSMFC 1990) pursuant to the Interjurisdictional Fisheries Act, 16 U.S.C. 4101 et seq. The fishery for thresher shark began off California in 1977. Thresher sharks are targeted by drift gillnets in California along with swordfish and mako sharks. Incidental catches of thresher shark also occur in set gillnet fisheries. Drift gillnet fisheries for thresher shark began off the coasts of Oregon and Washington in 1983 under experimental fishing permits. This permit fishery in Oregon and Washington continued through 1988, when it was terminated due to bycatch of marine mammals and leatherback turtles, declining interest in the fishery and concerns about the abundance of thresher shark. The PSMFC plan established a management panel composed of one member each from the states of Washington, Oregon, and California, which made management recommendations to the state agencies. The plan proposed an annual coastwide thresher shark harvest guideline of 750,000 pounds (340 mt dw) and discouraged catches of juvenile sharks. No quotas were established but states did agree to this harvest

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guideline, which since 1991 has never been approached. No additional management actions were adopted subsequent to the PSMFC plan.

The Western Pacific Council consulted the Pacific and North Pacific Councils on a proposal they made to be the single council designated for HMS management. The Pacific Council opposed this approach. In July 1996, after receiving input from the affected councils and industry groups, NMFS concluded that single council designation was not necessary at that time to achieve effective management under the Magnuson-Stevens Act or to support the Department of State in carrying out U.S. obligations. At the September 1997 Pacific Council meeting, the Southwest Region of NMFS (now part of the West Coast Region) presented a paper outlining options for Pacific Council involvement in HMS management. Options included no action, the Western Pacific proposal, Secretarial management, a joint FMP and a separate West Coast FMP. The paper summarized numerous activities at the national and international levels affecting HMS fisheries based on the West Coast. NMFS argued that the regional councils should play an active role in planning U.S. participation in future internationally managed HMS fisheries, and that the Pacific Council has unique capabilities for reaching the diverse fishing industry of the West Coast and involving them in the development of management policy. At that meeting, the Pacific Council established an HMS Policy Committee to address HMS issues and coordinate with the other councils. At the November 1997 meeting, the Council appointed a representative to attend meetings of the IATTC and negotiations underway to establish the WCPFC (the MHL process) and recommended establishment of an inter-council coordinating committee. In June 1998, the Council appointed members to a West Coast HMS Advisory Subpanel composed of representatives of constituent groups.

In September 1998, representatives of the three Pacific area councils and NMFS met to discuss collaboration in HMS management. The NMFS Southwest Region (now the West Coast Region) presented a “straw man” approach for coordinated management, under which the existing Western Pacific Council FMP would serve as the foundation for the comprehensive plan. The WPFMC did not support this collaborative approach. In June 1999, the Pacific Council voted to begin development of an FMP for HMS fisheries. The Council preferred that some form of comprehensive FMP be developed with all three councils involved and wrote the other two councils inviting their participation. While the Council recognized the difficulties associated with joint FMPs, it was optimistic that framework procedures and operational mechanisms could be developed to allow either independent or joint council actions as necessary and appropriate to achieve FMP objectives. While the North Pacific Council expressed support for a joint FMP, the Western Pacific Council stated that it was not inclined to participate at that time. The Pacific Council decided to begin development of a separate FMP for West Coast-based HMS fisheries, holding open the alternative of a comprehensive FMP in the future should the Western Pacific decide to participate.

In March 2001, NMFS wrote the Council to provide updated information on recent domestic HMS fishery management issues that had a bearing on the development of the FMP. –As a result, the Council realized it needed to address immediate HMS fishery management regulation issues rather than to prepare only a framework plan.

1.6 Management Context

This FMP is intended to facilitate Council engagement with RFMOs, other international obligations that the U.S. is a party to, and domestic parties including the WPFMC and Indian Tribes.

1.6.1 *International Entities and Agreements*

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The U.S. is a member of the Inter-American Tropical Tuna Commission (IATTC), which was established in 1950. Pursuant to the Tuna Conventions Act of 1950, as amended, NMFS promulgates regulations to carry out IATTC recommendations that have been approved by the Department of State. In 2003, parties to the IATTC signed the Convention for the Strengthening of the Inter-American Tropical Tuna Commission Established by the 1949 Convention between the United States of America and the Republic of Costa Rica, commonly referred to “Antigua Convention.” The Antigua Convention defines the Convention Area to consist of the waters bounded by the coast of the Americas, the 50° N and 50° S parallels, and the 150° W meridian. Historically, the species under IATTC purview included all HMS in the Convention Area and the IATTC focused almost exclusively on tropical tuna species (and especially yellowfin tuna) taken in purse seine, baitboat, and longline fisheries. However, the Antigua Convention promotes an ecosystem approach, which opens the possibility of considering other organisms that interact with HMS fisheries. Stock assessments by IATTC scientific staff are conducted regularly on tropical tunas.

The multi-lateral Agreement on the International Dolphin Conservation Program (AIDCP) was signed in 1998. The AIDCP succeeded the 1992 Agreement on the Conservation of Dolphins (La Jolla Agreement) which was later enhanced in 1995 by the Declaration of Panama. The IATTC provides the secretariat for the AIDCP. The objectives of the AIDCP are: 1) to progressively reduce incidental dolphin mortalities in the tuna purse-seine fisheries in the Agreement Area to levels approaching zero, through the setting of annual limits; 2) with the goal of eliminating dolphin mortality in this fishery, to seek ecologically sound means of capturing large yellowfin tunas not in association with dolphins; and 3) to ensure the long term sustainability of the tuna stocks in the Agreement Area, as well as that of the marine resources related to this fishery, taking into consideration the interrelationship among species in the ecosystem, with special emphasis on, *inter alia*, avoiding, reducing and minimizing bycatch and discards of juvenile tunas and non-target species. The International Dolphin Conservation Program Act (IDCPA), among other things, amended the Marine Mammal Protection Act to implement the Declaration of Panama, including the objectives of the International Dolphin Conservation Program, into US law.

The Western and Central Pacific Fisheries Commission was established by the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, which entered into force on April 19, 2004. While West Coast interests are only peripherally involved in management of major tuna fisheries in the WCPO, the WCPFC’s Northern Committee makes recommendations for management of North Pacific swordfish, albacore, and bluefin, all of which are of interest to West Coast fisheries.

(from previous Section 1.6.9) The International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC) The ISC evolved through a series of consultations between the U.S. and Japan with a twofold purpose: 1) To enhance scientific research and cooperation for conservation and rational utilization of the species of tuna and tuna-like fishes which inhabit the north Pacific Ocean during a part or all of their life cycle; and 2) To establish the scientific groundwork, if at some point in the future, it is decided to create a multilateral regime for the conservation and rational utilization of these species in this region.

Current ISC membership can include coastal states/economies of the region and states/economies with vessels fishing for these species in the region. Observer participants include relevant intergovernmental fishery organizations, relevant intergovernmental marine science organizations and other entities with vessels fishing for these species in the region.

This membership includes Canada, Chinese-Taipei, Japan, Republic of Korea, Mexico, People’s Republic of China, and the U.S. are members. Non-voting membership include the FAO, North Pacific Marine Science Organization (PICES), Pacific Community (SPC), and WCPFC; and cooperating non-membership includes the IATTC. Nongovernment organizations participate at ISC meetings as observers. The ISC is

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the science provider for the WCPFC Northern Committee through a Memorandum of Understanding.

The ISC regularly assesses and analyzes fishery and other relevant information concerning northern stocks. It meets annually in a plenary session and develops conservation recommendations for northern stocks. It also formulates research proposals and coordinates research on northern stocks. Through an MOU, the ISC is the science provider for the WCPFC Northern Committee.

The ISC operates through working groups composed of scientific experts from organizations affiliated with both member and non-member nations. This includes Albacore, Billfish, Pacific bluefin tuna, Shark, and Statistics working groups who meet periodically.

In 1981, the United States and Canada entered into the U.S.-Canada Albacore Treaty regarding fishing for albacore tuna in the eastern Pacific. Under the treaty, U.S. albacore vessels are authorized to fish for albacore in waters under the jurisdiction of Canada and more than 12 miles from the baseline from which the territorial sea is measured and to use certain port facilities in Canada. Albacore may be landed in that port for sale, export, or transshipment back to the U.S. Similarly, Canadian vessels are authorized to fish in waters under U.S. jurisdiction more than 12 miles from the baseline from which the territorial sea is measured and to use certain U.S. ports to obtain supplies and other services. Albacore may be landed in those ports for sale, export, or transshipment back to Canada. The parties annually exchange lists of vessels that may fish in the other nation's zone, though these lists are not binding (that is, a vessel on a list is not obliged to fish in the other nation's waters). Logbooks of catch and effort are to be maintained, and the nations are to exchange data on the fisheries. The agreement was amended in 2002 and codified by law in April 2004.

United Nations Agreements: The United Nations Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (known as the UNIA or Fish Stocks Agreement) under the Law of the Sea Treaty interprets the duty of nations to cooperate in conservation and management of fishery resources. Measures adopted in the EEZ of a coastal state and by any international arrangement for HMS in the region should be compatible. The Agreement was adopted in 1995 by the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks and the requirements for the entry into force of the Agreement were met on 11 November 2001. A coastal state should not adopt measures that would undermine the effectiveness of regional measures to achieve conservation of the stocks. In the case of the Pacific Council, for example, while the UNIA does not dictate how management of HMS fisheries in the U.S. EEZ should be carried out, the UNIA requires that EEZ management be compatible with management under any international arrangement (such as the IATTC, for species that are under IATTC conservation measures).

The U.S. also has participated in deliberations and decisions of the Food and Agriculture Organization of the United Nations (FAO) that have implications for HMS management under the FMP. The Committee on Fisheries of FAO has agreed to international plans of action dealing on a variety of conservation issues. The international plans of action (IPOAs) are voluntary instruments elaborated within the framework of the Code of Conduct for Responsible Fisheries. They apply to all States and entities and to all fishers. Four IPOAs have been developed to date: International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds), for the Conservation and Management of Sharks (IPOA-Sharks) to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU), for the Management of Fishing Capacity (IPOA-Capacity). In turn, the United States has developed national plans of action (NPOAs) to carry out the objectives of the international plans of action. The FMP can provide a mechanism for considering and implementing specific actions that support these national plans of action. In fact, the seabird avoidance measures implemented through this FMP are consistent with the seabird NPOA.

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1.6.2 High Seas Fishing Compliance Act (HSFCA)

The International Conservation and Management Measures by Fishing Vessels on the High Seas was adopted by the U.N. Food and Agriculture Organization (FAO) in November 1993. It establishes the responsibility of each nation for the actions of vessels fishing under that nation's flag on the high seas. The agreement requires that vessels have specific authorization from their flag nation to participate in high seas fishing. Further, nations must maintain a registry of authorized vessels, ensure that those vessels are marked for identification according to international standards, and ensure that they report sufficient information on their fishing activities. The High Seas Fishing Compliance Act (HSFCA) is the domestic legislation enacted in 1995 to provide authority to the Secretary of Commerce to implement this FAO Agreement.

1.6.3 Western Pacific Pelagics FMP

The initial Western Pacific FMP was adopted in 1987 and included initial estimates of maximum sustainable yield (MSY) for the stocks and set optimum yield (OY) for these fisheries in the EEZ. The regulations applied to domestic and foreign fishing for billfishes, wahoo, mahimahi, and oceanic sharks. Among the original regulations were a prohibition on drift gillnet fishing within the region's EEZ and provisions for experimental fishing permits. The FMP prohibited foreign longline vessels from fishing within certain areas of the EEZ. Additional areas up to 150 nm from Guam and the main Hawaiian Islands and up to 100 nm from the Northwestern Hawaiian Islands may be closed to foreign longline vessels if their fishing activity is causing adverse impacts on domestic fishery performance, excessive waste of catch, excessive enforcement costs, or adverse effects on stocks. No legal foreign longline fishing has occurred under the FMP. The WPFMC substantially reorganized its existing FMPs to create regional fishery ecosystem plans. One of these, which replaced the Pelagics FMP is the Pelagic Fishery Ecosystem Plan, implemented in 2009.

1.6.4 Relationship to Existing Fishery Management

An aspiration of the Council in adopting this FMP is to provide a basis for harmonizing management of fisheries by U.S. vessels that fish in both the western and eastern Pacific through engagement with the international entities and agreements described in Section 1.6.1. The FMP also can be a mechanism for coordinating HMS management responsibilities stemming from state laws and regulations, the Marine Mammal Protection Act (MMPA), and the Endangered Species Act (ESA). Such coordination could also provide an open and continuing process for considering the possible need for changes in those regulations as conditions change or new information becomes available.

1.6.5 Treaty Indian Fishing Rights

Legal Considerations

Treaties between the United States and numerous Pacific Northwest Indian tribes reserve to these tribes the right of taking fish at usual and accustomed grounds and stations ("u & a grounds") in common with all citizens of the United States. See *U.S. v. Washington*, 384 F. Supp. 312, 349-350 (W.D. Wash. 1974).

The National Marine Fisheries Service recognizes four tribes as having u & a grounds in the marine areas managed by this FMP: the Makah, Hoh, and Quileute tribes, and the Quinault Indian Nation. The Makah Tribe is a party to the Treaty of Neah Bay, Jan. 31, 1855, 12 Stat. 939. See 384 F. Supp. at 349, 363. The Hoh and Quileute tribes and the Quinault Indian Nation are successors in interest to tribes that signed the Treaty with the Quinault, et al. (Treaty of Olympia), July 1, 1855, 12 Stat. 971. See 384 F. Supp. at 349, 359 (Hoh), 371 (Quileute), 374 (Quinault). The tribes' u&a grounds do not vary by species of fish. *U.S. v. Washington*, 157 F. 3d 630, 645 (9th Cir. 1998).

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The treaty fishing right is generally described as the opportunity to take a fair share of the fish, which is interpreted as up to 50 percent of the harvestable surplus of all species of fish and shellfish that pass through the tribes' u&a grounds. *Washington v. Washington State Commercial Passenger Fishing Vessel Association*, 443 U.S. 658, 685-687 (1979) (salmon); *U.S. v. Washington*, 459 F. Supp. 1020, 1065 (1978) (herring); *Makah v. Brown*, No. C85-160R, and *U.S. v. Washington*, Civil No. 9213 - Phase I, Subproceeding No. 92-1 (W.D. Wash., Order on Five Motions Relating to Treaty Halibut Fishing, at 6, Dec. 29, 1993) (halibut); *U.S. v. Washington*, 873 F. Supp. 1422, 1445 and n. 30 (W.D. Wash. 1994), *aff'd* in part and *rev'd* in part, 157 F. 3d 630, 651-652 (9th Cir. 1998), *cert. denied*, 119 S.Ct. 1376 (1999) (shellfish); *U.S. v. Washington*, Subproceeding 96-2 (Order Granting Makah's Motion for Summary Judgment, etc. at 4, November 5, 1996) (Pacific whiting). The court applied the conservation necessity principle to federal determinations of harvestable surplus in *Makah v. Brown*, No. C85-160R/ *United States v. Washington*, Civil No. 9213 - Phase I, Subproceeding No. 92-1, Order on Five Motions Relating to Treaty Halibut Fishing, at 6-7, (W.D. Wash. Dec. 29, 1993); *Midwater Trawlers Co-op. v. Department of Commerce*, 282 F.3d 710, 718-719 (9th Cir. 2002). *U.S. v. Washington*, 873 F.Supp. 1422, 1430, *aff'd* 157 F. 3d 630, 644-645 (9th Cir. 1998), *cert. denied*, 119 S.Ct. 1376; *Midwater Trawlers Co-op. v. Department of Commerce*, 282 F.3d 710, 717 (9th Cir. 2002)

***U.S. v. Washington*, 384 F.Supp. 312, 364-365 (W.D. Wash. 1974).**

The National Marine Fisheries Service recognizes the areas set forth in the regulations cited below as marine u&a grounds of the four Washington coastal tribes. The Makah u&a grounds were adjudicated in *U.S. v. Washington*, 626 F.Supp. 1405, 1466 (W.D. Wash. 1985), *aff'd* 730 F.2d 1314 (9th Cir. 1984); see also *Makah Indian Tribe v. Verity*, 910 F.2d 555, 556 (9th Cir. 1990); *Midwater Trawlers Co-op. v. Department of Commerce*, 282 F.3d 710, 718 (9th Cir. 2002). The u&a grounds of the Quileute and Quinault tribes were adjudicated in *United States v. Washington*, 2:09-sp-00001-RSM, (W.D. Wash. Sept. 3, 2015). The u&a grounds of the Hoh tribe have been recognized administratively by NMFS. See, e.g., 67 Fed. Reg. 30616, 30624 (May 7, 2002) (u&a grounds for salmon); 50 C.F.R. 660.324(c) (u&a grounds for groundfish); 50 C.F.R. 300.64(i) (u&a grounds for halibut). The u&a grounds recognized by NMFS may be revised as ordered by a federal court.

The legal principles described above support the conclusion that treaty Indian fishing rights apply to highly migratory species that pass through the coastal tribes' ocean u&a grounds. The quantity of this right has not yet been determined or adjudicated, although it is possible that specific treaty Indian allocations may be necessary in the future. To anticipate this eventuality, and to establish an orderly process for implementing treaty fisheries, this FMP authorizes adoption of procedures to accommodate treaty fishing rights in the implementing regulations.

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4.0 Preventing Overfishing and Achieving Optimum Yield

This chapter describes the framework for controlling catch from HMS fisheries to achieve the overall objective of optimum yield. As discussed throughout, domestic catches are often only a small fraction of the stock-wide harvest. (The HMS SAFE document periodically reports the fraction of stock-wide catch represented by West Coast fisheries). Most HMS MUS support large and widespread international fisheries that are best managed cooperatively with other nations through the two Pacific tuna RFMOs.

Some HMS MUS, such as sharks, possess life histories characterized by low productivity. Not only are they more easily overfished, but recovery takes longer, i.e., the species are less resilient to overfishing. Some of these species have a localized distribution and life stage needs, concentrated within the U.S. West Coast EEZ, thus supporting smaller fisheries that tend to be more regional than international. Their management should be more conservative, and may require more proactive and targeted regional leadership for species with localized distributions.

Managing conservatively means being precautionary, especially when there are large uncertainties in how a stock is being affected by fishing. Besides lowering the threshold for taking remedial action, it could mean preventing rapid growth of fisheries to prevent overshooting of management goals, or taking steps to protect the reproductive potential of stocks.

The goal of the Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act of 1996 and Magnuson-Stevens Conservation and Management Reauthorization Act of 2006, is to ensure the long-term sustainability of fisheries and fish stocks by halting or preventing overfishing and by rebuilding overfished stocks. The Act requires developing fishery management plans for exploited species of U.S. seas including shelf, anadromous, and highly migratory species whose ranges extend beyond the EEZ. By its National Standard 1, optimum yield is the ultimate goal for each fishery.

National Standard 1 Guidelines, as required by the Magnuson-Stevens Act and published in the Code of Federal Regulations (50 CFR 600.310) were developed to assist in implementing the Act.

4.1 Reference Points Including MSY, OY, and Status Determination Criteria

Reference points are guideposts for managing exploited stocks based on stock biomass and the amount of catch (and thus fishing mortality) that is occurring. They are used to determine if overfishing is occurring or a stock is overfished. In either case control rules or other predetermined procedures are triggered to reduce fishing mortality. However, for most HMS MUS stock rebuilding will be ineffective without international cooperation. For such species, domestic regulations must be predicated on the relative impact of West Coast fisheries.

4.1.1 *Reference Points Required for All Stocks*

Section 303(a)(15) of the Magnuson-Stevens Act applies “unless otherwise provided for under an international agreement in which the United States participates” (P.L. 109-479 104(b)(1)). This exception applies to stocks or stock complexes subject to management under an international agreement, which is defined as “any bilateral or multilateral treaty, convention, or agreement which relates to fishing and to which the United States is a party” (see Magnuson-Stevens Act section 3(24)). Maximum sustainable yield, optimum yield and status determination criteria would still need to be specified for stocks subject to this exception.

Maximum sustainable yield (MSY): MSY is the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological, environmental conditions and fishery

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technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets. For management purposes MSY is usually expressed in terms of the following reference points:

MSY fishing mortality rate (F_{MSY}): The fishing mortality rate that, if applied over the long term, would result in MSY.

MSY stock size (B_{MSY}): The long-term average size of the stock or stock complex, measured in terms of spawning biomass or other appropriate measure of the stock's reproductive potential that would be achieved by fishing at F_{MSY} .

Status determination criteria (SDC) are quantifiable thresholds (or their proxies) that are used to determine if overfishing has occurred, or if the stock or stock complex is overfished. "Overfished" relates to biomass of a stock or stock complex, and "overfishing" pertains to a rate or level of removal of fish from a stock or stock complex. SDC are:

Maximum fishing mortality threshold (MFMT): The level of fishing mortality (F), on an annual basis, above which overfishing is occurring. The MFMT or reasonable proxy may be expressed either as a single number (a fishing mortality rate or F value), or as a function of spawning biomass or other measure of reproductive potential.

Overfishing limit (OFL): The annual amount of catch that corresponds to the estimate of MFMT applied to a stock or stock complex's abundance and is expressed in terms of numbers or weight of fish. The OFL is an estimate of the catch level above which overfishing is occurring.

Minimum stock size threshold (MSST): The level of biomass below which the stock or stock complex is considered to be overfished.

Optimum yield (OY): The amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems.

4.1.2 Reference Points Required for Stocks not Subject to the Exception under MSA Section 303(a)(15)

Acceptable biological catch (ABC): A level of a stock or stock complex's annual catch that accounts for the scientific uncertainty in the estimate of OFL and any other scientific uncertainty, and should be specified based on the ABC control rule.

Annual catch limit (ACL): The level of annual catch of a stock or stock complex that serves as the basis for invoking accountability measures (AMs). ACL cannot exceed the ABC, but may be divided into sector-ACLs.

For domestically managed stocks an ABC control rule must be established. This control rule is a specified approach to setting the ABC for a stock or stock complex as a function of the scientific uncertainty in the estimate of OFL and any other scientific uncertainty.

National Standard 1 Guidelines provide an exception to the requirement to establish ABCs, ACLs, and AMs for stocks or stock complexes subject to management under an international agreement. By inference the above reference points would need to be established for stocks not subject to this international exception and are wholly managed domestically.

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4.2 Maximum Sustainable Yield

Because MSY is a long-term average, it need not be estimated annually, but it must be based on the best scientific information available, and should be re-estimated as required by changes in long-term environmental or ecological conditions, fishery technological characteristics, or new scientific information.

As part of the biennial process (see Chapter 5) the HMSMT will review recent stock assessments or other information as described below and submit a draft SAFE document for review at the June Council meeting containing MSY estimates, noting if they are a change from the current value. The SSC will review these estimates and make a recommendation to the Council on their suitability for management. Based on this advice the Council may recommend a revision to a current MSY estimate to NMFS.

MSY is estimated based on the amount of information available about the stock. The following categories show the relationship between available information and the estimation of MSY:

Category 1, regularly assessed stocks: A plausible estimate of MSY (and other MSY-based reference points) may be determined from the assessment. In the event that the Council determines, based on advice from the SSC, that MSY estimates derived from an assessment are not suitable for management, the Council may recommend changes in the way that MSY is estimated in the assessment. Because HMS assessments are generally conducted by working groups outside of the Council process, such recommendations would be forwarded to the RFMO conducting or sponsoring the stock assessment through the U.S. delegation for consideration when conducting future assessments. In that event the Council could recommend to retain any current MSY estimate in the FMP or regulations, or propose an alternate estimate.

Category 2, unassessed stocks with catch history and additional information on relative abundance or stock productivity: The HMSMT compiles the best available stockwide catch data, or if not available, regional catch data and all additional information on a stock's productivity including relative abundance or catch/effort data if available. MSY or proxy estimates will be developed based on the catch time series and additional information. The relative impact of U.S. west coast fisheries may help to inform decisions on selecting appropriate reference points.

Category 3, unassessed stocks with catch history but lacking further information on relative stock abundance or productivity: The HMSMT compiles the best available stockwide catch data, or if not available, regional catch data. A catch-based method such as the Depletion Corrected Average Catch (DCAC), Depletion Based Stock Reduction Analysis (DB-SRA), or in the case of a relatively stable catch history without indications of stock depletion, an average of selected catch levels may be chosen to represent a proxy MSY.

MSY is specified as an absolute quantity, either in weight or number of fish. For management purposes the estimate of MSY by itself is less relevant than the reference points, F_{MSY} and B_{MSY} , that may be derived from it. However, for many HMS, a deterministic estimate of MSY may not be possible. In these cases proxy values for MSY-based reference points may be used. These MSY related reference points may be specified in various ways such as referenced to a stock depletion level (biomass relative to unfished biomass) or spawning potential ratio (the spawning potential per recruit referenced to the unfished level).

4.3 Optimum Yield

OY is defined as MSY reduced by relevant socioeconomic factors, ecological considerations, and fishery-biological constraints so as to provide the greatest long-term benefits to the Nation. Therefore, OY cannot be set greater than MSY, and must take into account the need to prevent overfishing and rebuild overfished HMS stocks. To the extent possible, the relevant social, economic, and ecological factors used to establish

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OY for an HMS stock or fishery should be quantified and reviewed in historical, short-term, and long-term contexts. National Standard 1 Guidelines includes examples of factors that may be considered when determining OY. Normally, OY should not be greater than the ABC or ACL, if identified (see below). However, since OY is a long-term average and ABCs and ACLs are set annually there may be instances where the ABC or ACL could exceed the OY on a short-term basis. The OYs specified when this FMP was approved shall remain in effect until changed by recommendation of the Council, after considering recommendations of the SSC, and approval by NMFS. If the Council incorporates a new management unit species into the FMP the OY shall be determined preferably concurrently or as soon as possible thereafter by recommendation of the Council, after considering input by the SSC, HMSMT, HMSMT, and approval by NMFS. OY specifications will be reported in the HMS SAFE.

Although required, specifying OY for internationally managed stocks is problematic, because achieving OY is intended to produce the greatest benefit to the Nation and prevent overfishing. For most of the HMS FMP MUS stocks fisheries managed under this FMP catch a very small proportion (in some cases less than one percent) of stock-wide catch. Therefore, for internationally-managed stocks, the Council may consider fishing levels that are agreed upon by the U.S. at the international level when specifying OY.

A stock's vulnerability should be a key consideration in specifying OY. Vulnerability is a combination of a stock's productivity, which depends upon its life history characteristics, and its susceptibility to the fishery. Productivity refers to the capacity of the stock to produce MSY and to recover if the population is depleted, and susceptibility is the potential for the stock to be impacted by the fishery.

When specifying OY the Council may consider a reduction from the estimate of MSY based on stock vulnerability along with the other factors discussed above. A 25% reduction could be considered as a starting point for specifying OY based on vulnerability. For stocks not subject to the exception under MSA Section 303(a)(15) the procedures for specifying the ABC and ACL should be taken into account so that on average the ABC does not exceed OY.

4.4 Assessment of Stock Status

National Standard 2 requires using the best scientific information in managing management unit species. This requires periodic updating of stock status for comparing against status determination criteria. Stock status will be reported in Stock Assessment and Fishery Evaluation (SAFE) reports (Section 4.6). In the case of species under international management, the Council should recommend adopted SDCs as limit reference points to be considered by the appropriate RFMO (see also Section 2.1).

The methods for determining SDCs (described below) imply an ability to determine the level of biomass relative to its unfished level (B_0) and (at least conceptually) relative to B_{MSY} , and to determine the level of mortality (F) relative to some target level like F_{MSY} . This may be possible only for Category I stocks. For Category II stocks relative biomass level could be estimated by the decline in catch rate (CPUE) or, with sufficient information on stock and recruitment, by percent spawning potential ratio (SPR), or proxies based on SPR, e.g., $B_{50\%}$ or $F_{50\%}$. For Category III stocks MSY or OY estimates based on catch history alone may be the only information available for management, and the F/F_{MSY} and B/B_{MSY} ratios must be derived from those estimates. In these cases, it may be necessary to use proxy values based on average stock-wide catch over an appropriate time period. F_{MSY} and B_{MSY} proxies can be scaled as fractions of B_0 or multiples of M , respectively, e.g., $B_{MSY}=0.5B_0$ or $F_{MSY}=1.0M$.

Both MSY and OY refer to a species' sustainable catch, stock-wide. For some species there is no stock-wide catch information, and some (e.g., mako shark, dorado) occur within the management area as the edges of wider distributions, so even their maximum, regional catch levels are unlikely to reflect stock production. While stock-wide MSY is unknown for those species, the local catches can be used to estimate

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a local or regional MSY.

4.4.1 Status Determination Criteria

The Council will monitor each managed HMS stock against status determination criteria (MFMT and MSST). The Secretary will use the following status determination criteria to identify stocks subject to overfishing or that have become overfished as specified at MSA section 304(e).

MFMT equals F_{MSY} . The **OFL** is the annual amount of catch that corresponds to the estimate of MFMT applied to a stock or stock complex's abundance and is expressed in terms of numbers or weight of fish. The OFL is an estimate of the catch level above which overfishing is occurring.

MSST is calculated as the greater of:

$$B_{MSST} = (1-M)B_{MSY} \text{ when } M \text{ (natural mortality)} \leq 0.5, \text{ or} \\ B_{MSST} = 0.5B_{MSY} \text{ when } M > 0.5$$

MSST or a reasonable proxy must be expressed in terms of spawning biomass or other reproductive potential. Should the estimated size of an HMS stock in a given year fall below this threshold, the stock is considered overfished.

Overfishing occurs when fishing mortality F is greater than the MFMT mortality or catch exceeds OFL for one year or more. Similarly, a stock is **overfished** when its size falls below the MSST stock biomass. MSA Section 304(e) and 304(i) describe required responses when a stock is subject to overfishing, approaching the overfished condition (i.e., if there is overfishing and the stock is expected to be overfished within two years) and when it is overfished. If Section 304(e) applies and overfishing is occurring, harvest rates in fisheries managed under this FMP must be reduced below the MFMT. This would be especially urgent when a stock is approaching an overfished condition. If the stock is overfished, a rebuilding plan must be prepared within one year to rebuild the stock. The rebuilding plan must bring the stock back to the level producing MSY within a specified time period.

4.4.2 Council Response to Overfishing

The Secretary will immediately notify the Council when a stock or stock complex is subject to overfishing or overfished. The Council must then take appropriate remedial action in relation to the applicability of Sections 304(e) and 304(i).

4.4.2.1 International Overfishing

If the Secretary determines that a stock is overfished or approaching the condition of being overfished due to excess international fishing pressure, and for which there are no measures (or no effective measures) to end overfishing under an international agreement to which the United States is a party, then the Council will respond according to the procedures described in Section 304(i) of the MSA. This section requires the Council make recommendations for domestic regulations to address the relative impact of U.S. vessels and recommendations for international actions to end overfishing and rebuild affected stocks.

Section 304(i)(2) states that the “appropriate council” shall develop recommendations for domestic measures and international actions to end overfishing. The Pacific Council may notify NMFS for which HMS stocks it considers itself the appropriate council. NMFS may use this information when deciding whether the Pacific Council is obligated to develop recommendations pursuant to Section 304(i)(2). The Council also may use this assessment of appropriateness to prioritize the stocks for which it will identify

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management reference points. Any determination that this FMP is the primary FMP for any particular HMS MUS stock should also be taken into account (see Section 3.2). While catches by fisheries managed under this FMP would be the main factor in deciding whether it is the “appropriate council,” the Council may wish to reserve the right to develop recommendations for international actions for stocks that such fisheries are only modestly engaged in (e.g., South Pacific albacore).

On December 15, 2004, NMFS notified the Council that overfishing was occurring Pacific-wide on bigeye tuna and requested the Council to take appropriate action. Because this notification occurred before the 2007 MSA reauthorization, when Section 304(i) was added, the Council incorporated rebuilding measures into this chapter of the FMP, pursuant to MSA Section 304I, by FMP Amendment 1. Given the subsequent implementation of the requirements in Section 304(i), this material was moved to an appendix under Amendment 4.

4.4.2.2 When International Fishing Pressure is not the Cause

Rebuilding of overfished stocks is a unilateral requirement by the Magnuson-Stevens Act, but, as already noted, internationally fished stocks require cooperative catch reductions among the fishing nations for this rebuilding to be effective. U.S. responsibility for rebuilding is greater for stocks not subject to MSA Section 304(i) and the requirements at Section 304(e) apply.

When stock size B falls below its MSST level, fishing mortality must be reduced sufficiently to allow stock rebuilding at least back to B_{MSY} by a target rebuilding year, which is identified in a rebuilding plan adopted by the Council. ACLs are then set accordingly until the stock is rebuilt to B_{MSY} .

Under NMFS’s National Standard Guidelines, a number of factors enter into the specification of the time period for rebuilding. The lower limit of the specified time period for rebuilding is determined by the status and biology of the stock or stock complex and its interactions with other components of the marine ecosystem, and is defined as the amount of time that would be required for rebuilding if fishing mortality were eliminated entirely. If the lower limit is less than 10 years, then the specified time period for rebuilding may be adjusted upward to the extent warranted by the needs of fishing communities and recommendations by international organizations in which the United States participates, except that no such upward adjustment can result in the specified time period exceeding 10 years, unless management measures under an international agreement in which the United States participates dictate otherwise. If the lower limit is 10 years or greater, then the specified time period for rebuilding may be adjusted upward to the extent warranted by the needs of fishing communities and recommendations by international organizations in which the United States participates, except that no such upward adjustment can exceed the rebuilding period calculated in the absence of fishing mortality plus one mean generation time or equivalent period based on the species’ life-history characteristics. Overfishing restrictions and recovery benefits must also be fair and equitable among fishery sectors. Rebuilding of internationally managed fisheries must reflect traditional U.S. participation in those fisheries relative to that of other nations.

In general, rebuilding is to remedy stock depletion, but there can also be rebuilding to remedy **local depletion**. The latter rebuilding could be domestic and unilateral. Local depletion occurs when localized catches are in excess of replacement from local and external (via net immigration) sources of production. As such, it can occur independently of the status of the overall stock. The local depletion of abundance can be stronger than the concurrent stock-wide decrease (Squire and Au 1990). In all cases, the degree and extent of this depletion must be assessed relative to the health of the overall stock and the resiliency of the species.

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4.5 Management of Stocks not Subject to the Exception under MSA Section 303(a)(15)

4.5.1 ABC, ACLs, ACTs, and Accountability Measures

According to the National Standard 1 Guidelines an ABC and a related ACL must be set for stocks managed under an FMP. However, the Guidelines include an exception to this requirement for stocks subject to management under an international agreement, which is defined as “any bilateral or multilateral treaty, convention, or agreement which relates to fishing and to which the United States is a party.” The Council will not normally set ABCs and ACLs for HMS MUS stocks the Council has determined meet this criterion. However, application of this exception does not preclude the Council from setting an ACL (and identifying an associated ABC to facilitate setting the ACL) if circumstances warrant.

The ABC is a level of a stock’s annual catch that accounts for scientific uncertainty in the estimate of OFL and any other scientific uncertainty. The ABC may not exceed the OFL. The HMSMT will develop ABC control rules for those managed stocks for which they are required. The ABC control rule will be reviewed by the Council’s SSC. Based on that review the Council will adopt the ABC control rule judged suitable by the SSC. Through this process the ABC control rule may be revised from time to time based on the best scientific information available. The ABC will be expressed in terms of catch, or landings if the ABC control rule incorporates an estimate of bycatch or other sources of fishing mortality.

The Council will establish ACLs for those managed stocks for which they are required.

The ACL may not exceed the ABC. ACLs will be established for each year in the biennial management cycle (see Chapter 5). ACLs are established, reviewed, and may be adjusted as part of this management cycle described. ACLs may be subdivided as part of the biennial management process. This includes establishing separate sector-ACLs and for stocks or stock complexes that have harvest in state waters, dividing the overall ACL between a Federal-ACL and a state-ACL.

The biennial management process will be used to implement accountability measures (AMs) should they be required. AMs are management controls to prevent ACLs from being exceeded and to correct or mitigate overages of the ACL if they occur. AMs include annual catch targets (ACTs) and ACT control rules, which the Council also may establish if they would help ensure the ACL is not exceeded. An ACT is an amount of annual catch of a stock or stock complex that is the management target of the fishery, and accounts for management uncertainty in controlling the actual catch at or below the ACL. The ACT control rule is a specified approach to setting the ACT for a stock or stock complex such that the risk of exceeding the ACL due to management uncertainty is at an acceptably low level.

Annually, the HMSMT will gather the requisite information needed to determine whether an ACL has been exceeded as soon as possible after the end of the fishing year (March 31). If catch exceeds the ACL more than once in the last four years, the system of ACLs and AMs will be reevaluated and modified if necessary. For the purposes of this evaluation a 3-year moving average or other multi-year approach may be used, if there are insufficient data to conduct the evaluation based on a single year’s catch.

4.5.2 Precautionary Management for Stocks above the MSST but below B_{MSY} or its Proxy

Fishery management councils have considerable latitude in how they rebuild stocks depleted below B_{MSY} but not overfished. To rebuild stock biomass to B_{MSY} a precautionary reduction from the ABC to the ACL should be considered. The reduction would be scaled to stock depletion in reference to the B_{MSY} target. This can take a linear form, so that the reduction from the ABC increases in proportion to the decline in

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biomass.¹¹ Other forms can be considered such as a series of stepped constant ACLs for different ranges of B_{MSY} values.

4.6 Stock Assessment and Fishery Evaluation Report

The SAFE report is a document or set of documents that provides the Council with a summary of information concerning the most recent biological condition of stocks and the marine ecosystems in the management unit and the social and economic condition of the recreational and commercial fishing interests, fishing communities, and the fish processing industries. It summarizes, on a periodic basis, the best available scientific information concerning the past, present, and possible future condition of the stocks, marine ecosystems, and fisheries being managed under federal regulation.

The Secretary of Commerce has the responsibility to assure that a SAFE report or similar document is prepared, reviewed annually, and changed as necessary. The Secretary or Council may utilize any combination of talent from Council, state, Federal, university, or other sources to acquire and analyze data and produce the SAFE report.

The SAFE report provides information to the Council and NMFS West Coast Region for determining annual harvest levels from each stock; documenting significant trends or changes in the resource, marine ecosystems, and fishery over time; and assessing the relative success of existing state and Federal fishery management programs. Information on bycatch and safety for each fishery should also be summarized. In addition, the SAFE report may be used to update or expand previous environmental and regulatory impact documents, and ecosystem and habitat descriptions.

National Standard 2 of the Magnuson-Stevens Act requires that the best scientific information available be used in developing FMPs and implementing regulations. For HMS, except dorado and sharks, NMFS and the Pacific Council rely on analyses and assessments adopted by various international bodies (of which U.S. is an active participant), such as the Inter-American Tropical Tuna Commission (IATTC), International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), and Western and Central Pacific Fisheries Commission (WCPFC). For other species such as dorado and sharks, the HMS Management Team and NMFS develops stock and fishery assessments, provides peer reviews and presents the results to the Council. The guidelines for implementation of National Standard 2 require preparation of an annual SAFE report. The SAFE report will largely rely on international body assessments, NMFS directed assessments, and any new fishery information. The National Standard 2 guidelines for a SAFE report, adapted for this FMP, are below.

Each SAFE report

- Must be scientifically based, and cite data sources and interpretations.
- Report any changes to numerical estimates of MSY and OY adopted by the Council as a recommendation to NMFS as part of the biennial process described in Chapter 5.
- Report estimates of the MFMT, OFL, and MSST for each stock or stock complex, along with information by which the Secretary may determine: Whether overfishing is occurring with respect to any stock or stock complex; if any stock or stock complex is overfished; if the rate or level of fishing mortality applied to any stock or stock complex is approaching the maximum fishing mortality threshold; and if the size of any stock or stock complex is approaching the minimum

¹¹ As an example, the Council's Pacific Coast Groundfish FMP identifies a "40-10" precautionary reduction predicated on an MSY proxy for roundfish of B40%. The linear reduction is scaled so that F or catch would be zero when stock size reaches 10% of its unfished size. Practically, however, catches would be managed under a rebuilding plan when the stock biomass falls below the MSST, which for roundfish is B25%.

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- stock size threshold.
- Should contain information on which to base harvest specifications, including ABCs, ACLs, and ACTs, if appropriate.
- May contain recommendations to the Council on matters concerning bycatch and incidental catch.
- May describe those management measures necessary to rebuild an overfished stock or stock complex to a level consistent with producing the MSY in such fishery.
- May contain additional economic, social, community, essential fish habitat, and ecological information pertinent to the success of management or the achievement of objectives of each FMP.

Periodically, to align with the preparation of the Council’s inventory of research and data needs prepared by the Scientific and Statistical Committee, the SAFE will contain research and data need recommendations.

Each year, in June and September, the HMS Management Team will deliver one combined SAFE report for all species in this FMP to the Council. The SAFE report will follow the guidelines specified in National Standard 2 and will be used by the Council and NMFS to develop and evaluate regulatory adjustments under the framework procedure or the FMP amendment process. This information will provide the basis for determining annual harvest levels from each stock, documenting significant trends or changes in the resource, the bycatch, and the fishery over time, and assessing the relative success of existing state and federal fishery management programs. In addition, the SAFE report can be used to update or expand previous environmental and regulatory impact documents, and ecosystem and habitat descriptions, including EFH.

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6.0 Management Measures

Sections 6.1 through 6.5 describe the general elements of the FMP that affect HMS fisheries directly. Many of these elements address fundamental requirements of the Magnuson-Stevens Act and other applicable law. They can be modified through framework procedures if the Council so chooses. Section 6.6 describes fishery-specific management measures.

6.1 Legal Gear and Gear Restrictions

Various state restrictions on gear exist in Washington, Oregon, and California. A listing of current state regulations in Washington, Oregon, and California at the time of plan adoption is in Appendix B to the HMS FMP FEIS (PFMC 2003).

Authorized fisheries under the authority of each regional fishery management council and all fishing gear used in each fishery in the EEZ are listed in Federal regulations (50 CFR 600.725). The use of any gear or participation in a fishery not on the list of authorized fisheries and gear is prohibited. Additional definitions and relevant regulations may appear elsewhere in Federal regulations, controlling the use of gear whether or not on the list at 50 CFR 600.725(v). An individual fisherman may notify the Council of the intent to use a gear or participate in a fishery not already on the list and the Council then has 90 days to regulate or prohibit the use of the gear.

Legal commercial HMS gear includes:

- Harpoon: Fishing gear consisting of a pointed dart or iron attached to the end of a line several hundred feet in length, the other end of which is attached to a flotation device. Harpoon gear is attached to a pole or stick that is propelled only by hand, and not by mechanical means.
- Surface Hook and Line: One or more hooks attached to one or more lines (includes troll, rod and reel, handline, albacore jig, live bait, and bait boat; excludes pelagic longline and mousetrap gear (Mousetrap gear means a free floating set of gear thrown from a vessel, composed of a length of line with a float on one end and one or more hooks or lures on the opposite end.)).
- Large Mesh Drift Gillnet: A panel of netting, suspended vertically in the water by floats along the top and weights along the bottom, which is not stationary nor anchored to the bottom. Large-mesh drift gillnets (used to target HMS) must have a minimum stretched mesh size of 14 inches. This definition minimizes potential problems from additional bycatch, protected species interactions, and competition with other fishery sectors. Small-mesh gillnet may not be used to target HMS. This description is consistent with the historic use of large-mesh drift gillnet to target swordfish and sharks.
- Purse Seine: A floated and weighted encircling net that is closed by means of a purse line threaded through rings attached to the bottom of the net (includes encircling net, purse seine, ring net, drum purse seine, lampera net).
- Pelagic Longline: A main line that is suspended horizontally in the water column, which is not stationary nor anchored, and from which dropper lines with hooks (gangions) are attached.

Legal recreational gear includes:

- Rod-and-Reel (pole-and-line): A hand-held (including rod holder) fishing rod with a manually or electrically operated reel attached.
- Spear: A sharp, pointed, or barbed instrument on a shaft. Spears can be operated manually or shot from a gun or sling.

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- Hook and Line: One or more hooks attached to one or more lines (excludes mousetrap gear).

These definitions of gear assure consistent and unambiguous coastwide management. However, the framework adjustment procedures (Chapter 5) may be used to modify the definitions of legal commercial or recreational fishing gears, authorize new gears, or prohibit use of existing legal gears. Therefore, the above list is not definitive.

Gear restrictions may specify the amount, dimensions, configuration or deployment of commercial and recreational fishing gear, for example minimum mesh size or the number of hooks. Changes in gear regulations should minimize costs to the fisheries, insofar as this is consistent with achieving the goals of the change.

6.2 Fishery Monitoring

6.2.1 *Permits*

Permits are a standard tool used in virtually all fishery management plans to support management by:

- Enhancing or facilitating collection of biological, economic or social data.
- Facilitating enforcement of laws and regulations.
- Identifying those who would be affected by actions to prevent or reduce excess capacity in the fishery.
- Providing information to meet international obligations.

A special kind of permit may be required for limited entry into a fishery. Implementation of a limited entry program would require an FMP amendment.

Commercial Permits

This FMP requires a federal permit for all commercial HMS vessels that fish for HMS off of, or land HMS in, the States of California, Oregon, and Washington. This general HMS permit is endorsed with a specific endorsement for each gear type to be used. Initially, there are no qualification criteria, such as minimum amount of landings, to obtain specific gear endorsements. Any commercial fisher may obtain the required gear endorsements. The permit is issued to a vessel owner for each specific fishing vessel used in commercial HMS fishing. This action is a practical procedure for tracking and controlling, by permits, commercial HMS fishing activities and the effects of regulations on those activities.

Regulations implementing the FMP establish the permitting system and set the terms and conditions for issuing a permit. The permits and endorsements are subject to sanctions, including revocation, as provided by Section 308(g) of the Magnuson-Stevens Act. Permit requirements could be changed in the future under the framework procedures (Chapter 5). This permit program would not eliminate existing state permit or licensing requirements, or federal permits under the High Seas Fishing Compliance Act.

Recreational Permits

This FMP requires a federal permit for all commercial passenger recreational fishing vessels (CPFV) that fish for HMS, but an existing state permit or license for recreational vessels can meet this requirement. The Council requests states to incorporate in their existing CPFV permit systems an allowance for a highly migratory species endorsement on the permits so that statistics can be gathered on that segment of the HMS fishery. This action is a practical procedure for tracking and controlling, by permits, recreational HMS fishing activities and the effects of regulations on those activities.

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6.2.2 Reporting Requirements

The Magnuson-Stevens Act requires that FMPs specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, and charter fishing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors (Section 303(a)(5)).

Catch, effort, and catch disposition data are critical for monitoring the fisheries, assessing the status of the stocks and fisheries, and evaluating the effectiveness of management. Historically, data necessary for management of HMS were not been regularly or fully collected by state, federal, or international organizations. HMS reporting requirements for basic catch-effort and bycatch are inconsistent among the states and may be insufficient for stock and fishery monitoring. Various overlapping reporting requirements may apply to vessels fishing for HMS from the West Coast. Permitting under the High Seas Fishing Compliance Act, states, the IATTC, and the WCPFC all trigger reporting requirements that may vary across different fisheries. A uniform federal requirement for vessels catching HMS in the West Coast EEZ facilitates consistent reporting.

All commercial and recreational party or charter/CPFV fishing vessels fishing for HMS must maintain and submit logbooks to NMFS. The original logbook form for each day of the fishing trip must be submitted to either NMFS or the appropriate state management agency. State or existing federal logbooks can meet this requirement as long as essential data elements are present, and data are available to NMFS subject to a data exchange agreement.¹² In any case, existing state reporting requirements, including those for landing receipts, would remain in effect. These reporting requirements may be adjusted under the framework process (Chapter 5). These requirements facilitate obtaining commercial (including CPFV) catch and effort data and allows for NMFS to develop a standardized database on West Coast fisheries.

6.2.3 Fishery Observer Authority

Observer programs are important for obtaining accurate information on total catch, catch disposition and protected species interactions, and also for detailed biological data and samples that managers cannot expect fishers to collect. Catch disposition information importantly includes data on bycatch, for which observers are indispensable in most cases (Section 6.3). Observation also can be very useful to better understand how different gears are actually deployed and how practical and effective regulations actually are. Observer placement authority for NMFS facilitates obtaining more accurate and complete information about fisheries. However, observers may not be suitable for all vessels; smaller vessels may not have accommodations for observers and vessels that take extended trips are much more costly to observe. Therefore, it is incumbent on NMFS to develop an observer sampling plan that, in addition to the scientific objectives, also recognizes the different types of vessels and vessel capabilities in the various fisheries.

An observer program must include a sample design and cost analysis (including impacts on the vessels being sampled) for Council review and comment prior to implementing the program. The sampling design will include sampling rate, which is a function of the required sample size for determining take rates or amounts with a given precision. When a take amount is the result of infrequent events, as in certain protected species interactions, very large sampling of a fleet is needed for its precise estimation, and cost will be the determining factor for sample size.

¹² Samples of logbook forms at the time the FMP was implemented can be found in the HMS FMP FEIS (PFMC 2003), Appendix D.

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NMFS may require that vessels carry observers when directed to do so by the NMFS Regional Administrator. NMFS is to complete initial observer sampling plans within six months of FMP implementation. NMFS will also develop initial observer sampling programs for the private recreational fisheries at a later date. This FMP focuses initially on the fisheries inadequately or not monitored under federal authority (MMPA, ESA) in meeting the FMP goal of documenting and reviewing bycatch mortality and protected species interactions in the HMS fisheries. Observer programs are initially mandated for the longline, surface hook-and-line, small purse seine, and commercial passenger fishing vessel (CPFV) fisheries.

Prior to implementation of this FMP, the large- and small-mesh drift gillnet fisheries already had MMPA-mandated observer programs, and the pelagic longline fishery came under an ESA mandate for observers. These programs will be periodically reviewed by the HMSMT for adequacy in meeting the goals of this FMP (important if the sampling rates in the protected species programs are reduced).

6.3 Bycatch Monitoring and Minimization

The Magnuson-Stevens Act requires that bycatch in fisheries be assessed, and that the bycatch and bycatch mortality be reduced to the extent practicable. Specifically National Standard 9 states that an FMP shall establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority: 1) minimize bycatch; and 2) minimize the mortality of bycatch which cannot be avoided.

Bycatch has been identified as a concern in HMS drift gillnet and longline fisheries and large-vessel purse seine fisheries (see Appendix C). Anecdotal accounts indicate bycatch in the small-vessel HMS purse seine and albacore troll fishery is relatively low, but these fisheries have not had formal observer programs. The harpoon fishery is thought to have little if any bycatch due to the selective nature of the gear.

6.3.1 *Standardized Bycatch Reporting Methodology*

The Council examined existing bycatch reporting methodology, and found that current logbook requirements for the various fisheries (states, NMFS and IATTC), together with periodic recreational fishing surveys and port sampling, have provided an important source of information on catch and bycatch for all HMS fisheries (Appendix C, section 5). Nonetheless, certain additional measures were considered to provide improved standardization of logbook reporting and better ground-truthing of the logbook data through pilot observer programs for some of the presently unobserved fisheries. Observer programs are authorized consistent with observer sampling plans prepared by NMFS (Section 6.6). All commercial and recreational party or charter/CPFV fishing vessels must maintain and submit to NMFS logbook records containing catch and effort statistics, including bycatch (Section 6.3). These measures, together with existing reporting requirements, should provide for a comprehensive standardized bycatch reporting system.

6.3.2 *Minimizing Bycatch and Bycatch Mortality*

Additional actions that will have the effect of reducing bycatch and bycatch mortality are discussed in Appendix C and under the various fishery-specific actions in Sections 6.6.1 (drift gillnet fishery), and 6.6.2 (pelagic longline fishery).

The FMP provides for a fishery-by-fishery review of measures to reduce bycatch and bycatch mortality (see Appendix C); establishes a framework for implementing bycatch reduction, adopts measures to minimize bycatch in pelagic longline and drift gillnet fisheries (Section 6.6), and adopts a formal voluntary “catch-and-release” program for HMS recreational fisheries. This meets the goals of the Magnuson-

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Stevens Act and of this FMP and the requirements for estimating bycatch and for establishing measures to reduce bycatch and bycatch mortality in HMS fisheries.

The framework procedure may be used to implement additional bycatch reporting and reduction measures. Potential measures/methods include but are not limited to:

- logbooks
- observers
- time/area closures
- gear restrictions or modifications, or use of alternative gear
- educational programs
- performance standards
- real-time data collection programs (e.g., VMS, electronic logbooks)

The voluntary “catch-and-release” program promotes reduction of bycatch mortality and waste by encouraging the live release of unwanted fish. Its rationale and origination for recreational fisheries is explained in Appendix C, section C.7. The establishment of the catch-and-release program removes live releases in the recreational fisheries from the “bycatch” category as defined in the Magnuson-Stevens Act in Section 3(2) and also promotes the handling and release of fish in a manner that minimizes the risk of incidental mortality, encourages the live release of small fish, and discourages waste.

Shared EC Species, identified in Section 3.3, could continue to be taken incidentally without violating Federal regulations, unless regulated or restricted for other purposes, such as with bycatch minimization regulations. The targeting of Shared EC Species is prohibited.

6.3.3 *Protected Species*

Various federal laws provide protection for special resources, including those for protected species under ESA, MMPA, and MBTA. Interactions of HMS fishing gears with protected species are described in Appendix D. This FMP authorizes the adoption of measures to minimize interactions of HMS gears with protected species and to implement recommendations contained in Biological Opinions (ESA), Take Reduction Plans (MMPA), Seabird Management Plans, or other relevant documents pertaining to HMS fisheries. The FMP also authorizes programs to collect information on interactions in any or all HMS fisheries.

Fishery-specific measures affecting protected species are included in the initial management measures for drift gillnet and longline fisheries (Sections 6.2.1, 6.2.2). Protected species interactions with the other gear types are not major issues (Appendix D), and no alternatives were considered for those gears.

The FMP adopts a framework authorization for protected species conservation measures and implements initial conservation and management measures for drift gillnet and pelagic longline fisheries as described in section 6.2, Appendix D and the HMS FMP FEIS (PFMC 2003, sections 9.2.5.1-2). The FMP requires general provision for its proposed protected species measures and also for future measures to reduce the takes of protected species and to minimize the risk of adverse impacts from those takes. The framework provisions of the FMP would be used to address new protected species concerns as they are identified.

Both through the SAFE Report and through special reports from interested parties (which could include the USFWS or environmental organizations), the Council

- will be advised of new protected species concerns;

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- would direct the HMSMT or others to investigate and recommend action;
- will determine if action is needed and, if it is viewed as a matter of substantial concern, will direct the completion of necessary documents to analyze the issues and evaluate alternatives; and
- will submit recommendations for corrective action to NMFS for consideration.

If an action is recommended by the Council and approved by NMFS, the action will be implemented by NMFS.

In fisheries where protected species takes are already being addressed, as by the Pacific Offshore Cetacean Take Reduction Team (POCTRT) for the drift gillnet fishery, any recommendations and supporting analyses, as by POCTRT, will be provided by NMFS to the Council for consideration. The Council will make recommendations as it deems appropriate to NMFS, which will make final decisions on whether to proceed with rulemaking under the MMPA or Magnuson-Stevens Act, as appropriate.

6.3.4 *Prohibited Species*

As indicated in Section 3.4, certain species are proposed to be designated as “prohibited species” under the FMP, meaning that they cannot be retained, or can be retained only under specified conditions, by persons fishing for management unit species. Three species of shark, as well as Pacific halibut and Pacific salmon, are recommended for this designation. The designation of prohibited species could be changed using framework procedures.

This FMP prohibits retention of great white, basking, and megamouth sharks (except for sale or donation of incidentally-caught specimens to recognized scientific and educational organizations). This FMP also prohibits retention of Pacific halibut and salmon (except when caught with authorized gears during authorized seasons). Neither the populations of these rare or low productivity sharks nor the strict management of halibut and salmon should be compromised by HMS fisheries. The prohibited species status of halibut and salmon is also consistent with U.S. policy and other FMPs.

The great white shark’s low productivity, its accessibility in certain localized areas, and its appeal to trophy hunters make it especially vulnerable to depletion. The species has been protected in the State of California since 1995; it may not be taken except for scientific and educational purposes under State permit. The sale (or donation) of incidentally-caught specimens, live or dead, to recognized scientific and educational organizations for research or display purposes would be allowed.

Megamouth sharks are extremely rare, though they are taken in the drift gillnet fishery on rare occasions. Protection is recommended because of extreme rarity and uniqueness. Sale (donation) of incidentally caught specimens to recognized scientific and educational organizations for research or display purposes would be allowed.

Basking sharks occur in greatest numbers in the Eastern Pacific in autumn and winter months. The fins are valuable in East Asian markets. This species is recommended for protection because it is thought to be among the least productive of shark species and thus highly vulnerable to depletion. The north Pacific stock is listed as endangered by the World Conservation Union (IUCN Red List of Threatened Species). The sale (donation) of incidentally-caught specimens, live or dead, to recognized scientific and educational organizations for research or display purposes is allowed.

Pacific halibut and Pacific salmon, while not HMS, are important as incidental catch in some HMS fisheries and so are recommended to be prohibited to ensure they are not targeted by HMS fishers, unless with authorized gear during authorized seasons. The fisheries that target halibut and salmon are already overcapitalized. Further, some runs of salmon are listed as threatened or endangered.

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6.4 Controlling Catch

6.4.1 Quotas or Harvest Guidelines

A *quota* is a specified numerical harvest objective for a stock, the attainment (or expected attainment) of which causes the complete closure of the fishery or fisheries for that species. A *harvest guideline* is a numerical harvest level that is a general objective and is not a quota. A harvest guideline and an annual catch target (ACT) are functionally equivalent. Attainment of a harvest guideline or ACT does not require a management response, but it does prompt review of the fishery. This will include a HMSMT meeting to evaluate the status of the stock and to make recommendations.

Factors involved in choosing between a quota or harvest guideline/ACT include:

- the status of the stock and the need to prevent overfishing or rebuild overfished stocks;
- effects on bycatch;
- impacts on fisheries;
- achievement of the FMP goals and objectives
- ability to monitor catches during the season;
- U.S. obligations under an international agreement.

Harvest guidelines/ACTs can help prevent overfishing or localized depletion of vulnerable species, or can be used in implementing management decisions by international HMS management bodies. Allocation of guideline amounts among fisheries may be necessary (see following section).

This FMP establishes harvest guidelines for selected shark species and authorizes establishment or modification of quotas or harvest guidelines under the framework provisions. These harvest guidelines are based on a “local MSY” concept. Initial harvest guidelines for common thresher and shortfin mako sharks, are set equal to an OY estimate specified as 0.75MSY. The MSY used is the local MSY (LMSY), as the stock-wide maximum sustainable harvests are not known.

The initial harvest guidelines are $OY=0.75 \times LMSY$, as follows:

common thresher	340 mt (round weight)
shortfin mako	150 mt (round weight).

The rationale for these harvest guidelines is that, as vulnerable species in this FMP and with total catches and extent of stocks poorly known, management of these sharks under precautionary harvest guidelines is appropriate. The thresher shark harvest guideline is lower than the recommended harvest limit set in the tri-state fishery management plan for thresher shark in place prior to FMP implementation.

These harvest guidelines pertain only to the portion of the stocks that are vulnerable to capture by West Coast vessels as they now fish. They are particularly conservative because local MSY necessarily underestimates stock-wide MSY. The guidelines are catch benchmarks that warn of possible approach to the local sustainable maximum.

The HMSMT will review the catches from the previous statistical year (April 1-March 31) and compare those catches with the established harvest guidelines; evaluate the status of the stocks; and develop recommendations for management measures, as appropriate. These management measures will be presented to the Council as part of the SAFE document at its June and/or September meetings to be reviewed and approved for public review. Final action on management measures would be scheduled for the

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Council's November meeting in the biennial cycle.

6.4.2 Allocation

This FMP authorizes allocation of HMS quotas or harvest guidelines among U.S. West Coast-based HMS fisheries if necessary using the full rulemaking framework process. In addition to other requirements of the FMP, the Council will consider the following factors when adopting allocations of HMS among domestic fisheries:

- present participation in and dependence on the fishery, including alternative fisheries;
- historical fishing practices in, and historical dependence on, the fishery;
- economics of the fishery;
- agreements or negotiated settlements involving the affected participants;
- potential biological impacts on any species affected by the allocation;
- consistency with the Magnuson-Stevens Act National Standards;
- consistency with the goals and objectives of the FMP.

The FMP does not establish initial quota allocations to different fisheries or fishery sectors, except that the commercial sale of striped marlin is prohibited, a de facto allocation to the recreational sector. No compelling argument was raised for repealing the long-standing (since 1937) no-sale status of striped marlin in California and for establishing it as a commercial species on the West Coast. Future allocations could be made using framework procedures. There is no pressing need to establish allocations as long as constraining ACLs are not implemented consistent with the international exception.

6.4.3 Incidental Catch Allowance

Incidental catch refers to harvest of HMS which are unavoidably caught while fishing for other species or fishing with gear that is not legal for the harvest of HMS. This FMP authorizes the harvest and landing of incidental catches by gears not listed as legal HMS gears in the FMP up to a maximum number or percentage of the total weight, per landing. The incidental limit may be adjusted, or separate limits may be established for different non-HMS fisheries, in accordance with framework procedures described in this chapter. The objectives of allowing incidental catches are to:

- Minimize discards in fisheries using gear that is not legal for harvesting HMS, while increasing fishing income by allowing retention and sale of limited amounts of HMS.
- Discourage targeting on HMS by non-HMS fisheries; also reduces any associated take of marine mammals, sea turtles, and seabirds.

This FMP allows incidental commercial landings of HMS, within limits, for non-HMS gears (e.g., bottom longline, trawl, pot gear, small mesh drift gillnet, set/trammel gillnets). These landing limits are:

- Small-mesh and set-net gillnetters may not land swordfish (consistent with California law), but are permitted to land other HMS, with the restriction of 10 fish per landing of each non-swordfish highly migratory species.
- Bottom longline landings are restricted to three HMS sharks in total or 20% of total landings by weight of HMS sharks, whichever is greater by weight.
- Trawl, pot gear, and other non-HMS gears are restricted to a maximum of 1% of total weight per landing for all HMS shark species combined (i.e., blue shark, shortfin mako shark, and common thresher shark) or two HMS sharks, whichever is greater.

These limits discourage targeting of HMS with non-HMS gears by limiting the allowed landings; reduces

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wastage of HMS by still allowing traditional levels of incidental catch by those gears.

These allowances are based on the frequency of HMS in landings by non-HMS gears, and are intended to be practical with respect to the levels of HMS expected to be taken by non-HMS gears while not targeting HMS. A description of analysis used to determine these limits may be found in the HMS FMP FEIS (PFMC 2003, section 9.2.4.2).

6.4.4 *Prohibition on the Sale of Striped Marlin*

This FMP prohibits the sale of striped marlin by vessels under Council jurisdiction. Greater regional and national net benefits are obtained from continuing coastwide under federal authority the long standing, California policy of reserving this species for sport use only. Striped marlin is considered to have far greater value as a recreational rather than commercial target species, and is only available seasonally. Prohibiting its sale removes the incentive for its taking by commercial fishers.

6.5 Other Measures

6.5.1 *Treaty Indian Fishing*

This FMP authorizes adoption of measures and procedures to accommodate treaty fishing rights in the initial implementing regulations for the FMP. Also authorize revisions to the initial regulations through regulatory amendments, without the need to amend the FMP. The initial implementing regulations would contain the measures and procedures specified below. This action is a practical procedure for accommodating treaty fishing rights, without need of plan amendments for revisions.

Initial Measures and Procedures

Under the FMP, the initial measures and procedures for accommodating treaty fishing rights are as follows:

- (a) Pacific Coast treaty Indian tribes have treaty rights to harvest HMS in their usual and accustomed (u&a) fishing areas in U.S. waters.
- (b) Pacific Coast treaty Indian tribes means the Hoh, Makah, and Quileute Indian Tribes and the Quinault Indian Nation.
- (c) The NMFS recognizes the areas set forth below as marine u&a fishing grounds of the four Washington coastal tribes. The Makah u&a grounds were adjudicated in U.S. v. Washington, 626 F.Supp. 1405, 1466 (W.D. Wash. 1985), affirmed 730 F.2d 1314 (9th Cir. 1984). The u&a grounds of the Quileute, Hoh, and Quinault tribes have been recognized administratively by NMFS. See, e.g., 64 Fed. Reg. 24087-24088 (May 5, 1999) (u&a grounds for groundfish); 50 C.F.R. 300.64(i) (u&a grounds for halibut). The u&a grounds recognized by NMFS may be revised as ordered by a federal court.
- (d) Procedures. The rights referred to in paragraph (a) will be implemented by the Secretary of Commerce, after consideration of the tribal request, the recommendation of the Council, and the comments of the public. The rights will be implemented either through an allocation of fish that will be managed by the tribes, or through regulations that will apply specifically to the tribal fisheries. An allocation or a regulation specific to the tribes shall be initiated by a written request from a Pacific Coast treaty Indian tribe to the NMFS Northwest Regional Administrator, at least 120 days prior to the time the allocation is desired to be effective, and will be subject to public review through the Council process. The Secretary recognizes the sovereign status and co-manager role of Indian tribes over shared Federal and tribal fishery resources. Accordingly, the Secretary

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will develop tribal allocations and regulations in consultation with the affected tribe(s) and, insofar as possible, with tribal consensus.

- (e) Identification. A valid treaty Indian identification card issued pursuant to 25 CFR Part 249, Subpart A, is prima facie evidence that the holder is a member of the Pacific Coast treaty Indian tribe named on the card.
- (f) Fishing (on a tribal allocation or under a federal regulation applicable to tribal fisheries) by a member of a Pacific Coast treaty Indian tribe within that tribe's usual and accustomed fishing area is not subject to provisions of the HMS regulations applicable to non-treaty fisheries.
- (g) Any member of a Pacific Coast treaty Indian tribe must comply with any applicable federal and tribal laws and regulations, when participating in a tribal HMS fishery implemented under paragraph (d) above.
- (h) Fishing by a member of a Pacific Coast treaty Indian tribe outside that tribe's usual and accustomed fishing area, or for a species of HMS not covered by a treaty allocation or applicable federal regulation, is subject to the HMS regulations applicable to non-treaty fisheries.

6.5.2 *Procedures for Reviewing State Regulations*

Any state may propose that the Council review a particular state regulation for the purpose of determining its consistency with the FMP and the need for complementary federal regulations. Although this procedure is directed at the review of new regulations, existing regulations affecting the harvest of highly migratory species managed by the FMP may also be reviewed under this process. The state making the proposal will include a summary of the regulation in question and concise arguments in support of consistency.

Upon receipt of a state's proposal, the Council may make an initial determination whether or not to proceed with the review. If the Council determines that the proposal has insufficient merit or little likelihood of being found consistent, it may terminate the process immediately and inform the petitioning state in writing of the reasons for its rejection.

If the Council determines sufficient merit exists to proceed with a determination, it will review the state's documentation or prepare an analysis considering, if relevant, the following factors:

- How the proposal furthers, or is not otherwise consistent with, the objectives of the FMP, the Magnuson-Stevens Act, and other applicable law
- Likely effect on or interaction with any other regulations in force for the fisheries in the area concerned
- Expected impacts on the species or species group taken in the fishery sector being affected by the regulation
- Economic impacts of the regulation, including changes in catch, effort, revenue, fishing costs, participation, and income to different sectors being regulated as well as to sectors that might be indirectly affected.
- Any impacts in terms of achievement of harvest guidelines or harvest quotas, maintaining year-round fisheries, maintaining stability in fisheries, prices to consumers, improved product quality, discards, joint venture operations, gear conflicts, enforcement, data collection, or other factors.

The Council will inform the public of the proposal and supporting analysis and invite public comments before and at the next scheduled Council meeting. At its next scheduled meeting, the Council will consider public testimony, public comment, advisory reports, and any further state comments or reports, and determine whether or not the state regulation is consistent with the FMP and whether or not to recommend implementation of complementary federal regulations or to endorse state regulations as consistent with the

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FMP without additional federal regulations.

If the Council recommends the implementation of complementary federal regulations, it will forward its recommendation with the proposed rule and rationale to the NMFS Regional Administrator for review and approval. The NMFS Regional Administrator will publish the proposed regulation in the *Federal Register* for public comment, after which, if approved, he/she will publish final regulations as soon as practicable. If the Regional Administrator disapproves the proposed regulations, he/she will inform the Council in writing of the reasons for disapproval.

6.5.3 *Exempted Fishing Permits*

Existing Federal Procedures. Exempted fishing is defined to be fishing practices that are new to a fishery and not otherwise allowed under an FMP. The NMFS Regional Administrator, using Federal EFP (Exempted Fishing Permit) procedures, may authorize the targeted or incidental harvest of HMS for experimental or exploratory fishing that would otherwise be prohibited. Applicants must submit their application package at least 60 days before the desired effective date of the EFP, provide a statement of purpose and goals of the EFP activity, the species (target and incidental) expected to be harvested, arrangements for disposition of all regulated species and any anticipated impacts on marine mammals or endangered species, and provide the times and places fishing will take place and the type, size and amount of gear to be used. There are no specific requirements. The Administrator may restrict the number of experimental permits by total catch, time, area, bycatch, incidental catch or protected species takes. The NMFS Regional Administrator may require any level of industry-funded observer coverage for these experimental permits.

Exempted fisheries are expected to be of limited size and duration and must be authorized by an EFP issued for the participating vessel in accordance with the criteria and procedures specified in 50 CFR 600.745. The duration of EFPs will ordinarily not exceed one year. Permits will not be renewed automatically. An application must be submitted to the Regional Administrator for each year. A fee sufficient to cover administrative expenses may be charged for EFPs. An applicant for an EFP need not be the owner or operator of the vessel(s) for which the EFP is requested as long as the proposed activity is compatible with limited entry and other management measures in the FMP.

The Regional Administrator or Director may attach terms and conditions to the EFP consistent with the purpose of the exempted fishing, including, but not limited to:

- (a) The maximum amount of each regulated species that can be harvested and landed during the term of the EFP, including trip limitations, where appropriate.
- (b) The number, size(s), name(s), and identification number(s) of the vessel(s) authorized to conduct fishing activities under the EFP.
- (c) The time(s) and place(s) where exempted fishing may be conducted.
- (d) The type, size, and amount of gear that may be used by each vessel operated under the EFP.
- (e) The condition that observers, a vessel monitoring system, or other electronic equipment be carried on board vessels operated under an EFP, and any necessary conditions, such as pre-deployment notification requirements.
- (f) Reasonable data reporting requirements.
- (g) Other conditions as may be necessary to assure compliance with the purposes of the EFP, consistent with the objectives of the FMP and other applicable law.

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- (h) Provisions for public release of data obtained under the EFP that are consistent with NOAA confidentiality of statistics procedures at set out in subpart E. An applicant may be required to waive the right to confidentiality of information gathered while conducting exempted fishing as a condition of an EFP.

Additional FMP Requirements for an Exempted Fishing Permit. This FMP places additional requirements for authorizing an EFP for targeting HMS species, including EC species shared between all four Council FMPs. An EFP proposal will be required to follow a specific Council protocol and be reviewed by the Council prior to application to NMFS. EFP proposals targeting management unit species or HMS EC species will be subject to the protocol for EFPs for HMS Fisheries (Council Operating Procedure 20). EFP proposals targeting EC species shared between all four FMPs, including the HMS FMP, will be subject to the protocol for Shared EC Species (Council Operating Procedure #24). The protocols are intended to ensure the Council has adequate information on all aspects of the proposed fishery and has adequate time to consider, review and formulate recommendations. These protocols will be available from the Council. They will require additional detailed information and analysis beyond those specifically required for a NMFS EFP. The protocols will specify timing for submissions and timing for Council review.

This FMP authorizes mandatory data reporting and mandatory on-board observers for vessels with exempted fishing permits (PFMC 2003, see section 9.2.4.6). Installation of vessel monitoring units (VMS) aboard vessels with exempted fishing permits may be also required.

The FMP requires that applicants submit for Council review and approval an initial EFP plan prior to formal application to NMFS, following the protocol in the Council Operating Procedure specific to HMS fishery EFPs. The protocol as adopted or modified will include, but not be limited to, the following elements:

- schedule and procedure for submitting EFP applications;
- format for applications;
- qualification criteria for applicants;
- Council internal review procedures;
- relevant laws and regulations that must be followed.

To serve its constituents, the Council needs this formal process through which it can review and make recommendations on the EFP applications to NMFS.

The Council will review, comment, and make recommendations on the plan and may require changes or request additional information. The final EFP plan and Council recommendations will then be provided by the applicant to NMFS for action. NMFS review and any subsequent issuance of an EFP will then proceed according to regulations specified at 50 CFR 600.745.

6.5.4 Temporary Adjustments due to Weather

The Council will consider and may provide, after consultation with the U.S. Coast Guard and persons utilizing the fishery, temporary adjustments for access to the fishery by vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safety of the vessels, except that the adjustment shall not adversely affect conservation efforts in other fisheries or discriminate among participants in the affected fishery. No adjustments due to weather are proposed at this time as the Council has no information from fishery participants or others to indicate that particular accommodations are needed to provide reasonable opportunity to harvest HMS. There are no quotas or allocations that could not be harvested due to poor weather.

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6.5.5 *Safety of Life at Sea*

National Standard 10 (NS-10) requires that conservation and management measures shall, to the extent practicable, promote the safety of human life at sea. The substantive requirements of NS-10 are fulfilled by Council, NMFS, USCG, and fishing industry consultation on the nature and extent of any adverse effects that proposed management measures may have on safety of human life at sea. The purpose of consultation is to identify and mitigate, to the extent practicable, any adverse effects. 50 CFR 600.355, which implements NS-10, provides lists of safety considerations and mitigation measures that could be considered. To fulfill NS-10, the Council will utilize existing Council and Council subgroup meeting procedures, and the framework provisions of the FMP. Except for automatic actions such as quota closures, the framework provisions require public comment and Council action before management actions are implemented. Safety and weather issues can be considered during the Council process. The USCG has a Council representative who regularly comments on proposed management measures. In addition, the USCG participates on the Council's Enforcement Consultants Committee, which is another forum for considering safety and weather issues. The HMS Management Team and Advisory Subpanel also hold public meetings where safety and weather concerns can be raised and addressed. Mitigation measures may be incorporated into pre-season and in-season actions under the framework procedures.

A NMFS regulation at 50 CFR 600.745 applies to any fishing vessel required to carry an observer as part of a mandatory observer program or carrying an observer as part of a voluntary observer program under the Magnuson-Stevens Act, MMPA (16 U.S.C. 1361 et seq.), the South Pacific Tuna Act of 1988 (16 U.S.C. 973 et seq.), or any other U.S. law. Observers may not depart on a fishing trip aboard a vessel that does not comply with United States Coast Guard safety requirements or that does not display a current commercial fishing vessel safety examination decal. All vessels required to carry an observer must meet Coast Guard safety requirements and display a current safety decal (issued within the previous two years). Vessels not meeting these requirements are deemed unsafe for purposes of carrying an observer and must correct deficiencies before departing port. The vessel owner or operator must also allow an observer to visually inspect any safety or accommodation requirement if requested. Observers are required to complete a pre-trip safety check of the emergency equipment and are encouraged to review emergency instructions with the operator before the vessel departs port.

6.5.6 *Domestic Annual Harvest (DAH), Total Allowable Level of Foreign Fishing (TALFF), and Domestic Annual Processing (DAP)*

The Magnuson-Stevens Act at 16 U.S.C. §1853(a)(4) requires that each fishery management plan assess and specify 1) the capacity and extent to which U.S. fishing vessels, on an annual basis, will harvest the OY from the fishery (DAH); 2) the portion of the OY which, on an annual basis, will not be harvested by U.S. fishing vessels and can be made available for foreign fishing (TALFF); and 3) the capacity and extent to which U.S. fish processors, on an annual basis, will process that portion of the OY that will be harvested by U.S. fishing vessels (DAP). Regulations implementing the Magnuson-Stevens Act at 50 C.F.R. § 600.516 further define the total allowable level of foreign fishing, as—with respect to any fishery subject to exclusive U.S. fishery management authority (i.e., the portion of the fishery that occurs within the U.S. EEZ)—that portion of the OY of such fishery that will not be caught by U.S. vessels.

All species in the management unit of this FMP are highly migratory and range far beyond the EEZ. As presently defined, the OY for each species is based on MSY for the entire stock, both within and beyond the U.S. EEZ. However, the U.S. domestic fleet harvests only a small portion of the OY, and only a small portion of the U.S. harvest is taken in the EEZ. The rest of the U.S. harvest is taken beyond the EEZ.

Presently, no highly migratory species in excess of U.S. harvest capacity are available for foreign fishing (TALFF) in the EEZ. The DAH of HMS from 1995 through 1999 has averaged 24,349 mt (HMS FMP

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FEIS Chapter 2, Table 2-1). During this period, an average of 1,074 vessels landed HMS on the West Coast (HMS FMP FEIS Chapter 2, Table 2-64). The amount of fishing gear actually deployed on an annual basis to take management unit species depends on availability of the resource. In all instances, the harvesting capacity of the U.S. fleet along the West Coast exceeds the amount of the resource available in the EEZ.

Similarly, no HMS are available for foreign processing. Chapter 2 of the HMS FMP FEIS documents the characteristics of 20 HMS communities, including the number of processors/buyers in each area. U.S. processors process fish caught within and outside the EEZ by U.S. vessels, and import additional HMS to meet market demand. Therefore, the capacity and extent of domestic annual processing (DAP) exceeds the amount of HMS harvested by U.S. vessels in the EEZ.

A review of the capacity and extent of domestic annual harvest and processing may be conducted periodically if warranted.

6.6 Fishery-Specific Conservation and Management Measures

This section describes fishery-specific management measures for the drift gillnet, longline, and purse seine fisheries. Other HMS fisheries do not have Federal regulations except for general requirements and prohibitions, such as permits and logbooks.

Management measures may be modified in the future, or new regulations may be implemented, using framework adjustment procedures in the FMP. These measures would stay in effect until revised or removed by specific action.

Management of recreational fishing, is mainly deferred to the states in this FMP, reflecting the mainly localized nature of sportfishing issues and values that are best addressed at that level. Although this FMP does have a proposed catch-and-release measure for the recreational fishery that could affect fishing practices, that program would be voluntary.

6.6.1 *Drift Gillnet Fishery Management Measures*

The drift large-mesh (14” minimum mesh size) gillnet fishery for swordfish and shark is managed under numerous complex and detailed federal and state regulations to protect the populations fished as well as the protected species incidentally taken. These regulations for large-mesh drift gillnets include:

- In addition to state permits, a federal HMS permit is required.
- Gear restrictions identified in the Pacific Offshore Cetacean Take Reduction Plan are required.
- A drift gillnet can be no longer than 6,000 ft.
- The gear is prohibited in waters off of Washington. This reflects an existing state of Washington prohibition on the use of drift gillnet gear
- Protected resource area closures include the Pacific Leatherback Conservation Area and the Pacific Loggerhead Conservation Area. The Pacific Loggerhead Conservation Area is effective June, July and August during a forecasted or occurring El Niño event.
- Mainland area closures include a complete closure of the fishery off of California February 1-April 30, within 75 nm May 1-August 14, and within 25 nm December 15-January 31 the following year; and east of a line approximating 1,000 fm off of Oregon
- There are other discrete area closures along the California coast and around the Channel Islands.

Regulations implemented through this FMP reflect federal conservation and management measures in place under the MMPA and ESA and all state regulations for swordfish/shark drift gillnet fishing except limited entry programs (which remained under states’ authority). The Council concluded it was premature to

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federalize the states' limited entry programs, with its increase in federal costs and administrative burdens. Existing time/area closures in federal and state regulations were deemed appropriate for adopting intact. Closures off Washington and Oregon are intended to protect the common thresher shark, sea turtles, and marine mammals. Oregon does not allow drift gillnets to target thresher shark, although DGN vessels have fished off both states and landed their catch in California.

6.6.2 *Pelagic Longline Fishery Management Measures*

The pelagic longline measures differ according to their application inside or outside the EEZ:

- The use of pelagic longline gear is prohibited in the EEZ. This avoids/prevents potential bycatch, protected species, and fishery competition problems by continuing the de facto longline prohibition throughout the EEZ. Proposals for research or an EFP for the use of longline gear under this prohibition will be evaluated when the proposals are submitted, according to EFP guidelines.
- Outside the EEZ the use of pelagic longline gear to make shallow sets to target swordfish is prohibited.¹³ A shallow set is defined as one where the deepest point of the main longline between any two floats, i.e., the deepest point in each sag of the main line, is at a depth less than or equal to 100 m (328.1 ft or 54.6 fm) below the sea surface.

Regulations consistent with those applicable to vessels fishing under a western Pacific longline limited entry permit in 2003 were implemented for pelagic longline vessels permitted under this FMP.¹⁴ These include:

- Area restrictions (in addition to the prohibition on shallow sets): From April 1 through May 31, a vessel may not use longline gear in waters bounded by 0° latitude and 15° N latitude, and 145° W longitude and 180° W longitude, receive fish caught in that area, or land fish caught in that area.
- Gear restrictions applicable when fishing west of 150°W longitude and north of the equator: Float lines must be longer than 20 m (65.6 ft or 10.9 fm); the use of light sticks is prohibited; when using conventional longline gear at least 15 branch lines between floats must be attached between any two floats; the deepest point of the main longline between any two floats must be deeper than 100 m at its deepest point. When using basket-style longline gear at least 10 branch lines must be must be attached between any two floats.
- Limits on the retention and landing of incidentally caught swordfish apply.
- Sea turtle mitigation measures including equipment, handling and resuscitation methods, and training are required.
- Seabird mitigation measures including equipment, handling and resuscitation methods, and training are required.
- Other measures for the proper release and handling of turtles and seabirds may apply.¹⁵
- VMS: Eligible units are specified and must be deployed at the direction of NMFS.

¹³ Originally the FMP would have allowed the use of longline gear to target swordfish with shallow sets east of 150°W longitude and north of the equator. However, as a consequence of the ESA section 7 consultation for the FMP, the use of shallow sets to target swordfish was prohibited in all waters beyond the EEZ (in addition to the general prohibition on the use of pelagic longline gear inside the West Coast EEZ). This prohibition does not apply to vessels fishing under a western Pacific longline limited entry permit.

¹⁴ At the time the FMP was drafted the use of shallow-set longline to target swordfish was prohibited for vessels fishing under a western Pacific longline limited entry permit. Selected measures, including this prohibition, would have applied to the pelagic longline fishery authorized under this FMP for vessels fishing west of 150°W longitude and north of the equator. However, the prohibition on using shallow sets to target swordfish by vessels fishing under a western Pacific longline limited entry permit was lifted in 2004 with measures to mitigate take and mortality of ESA-listed sea turtles.

¹⁵ Full description of all applicable measures are in 50 CFR Part 660, see 66 FR 63630 (turtles) and 67 FR 34408 (seabirds).

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6.6.3 *Purse Seine Fishery Management Measures*

These measures pertain to the small purse seine vessels (< 364 mt carrying capacity) fishing HMS.

This FMP opens the entire EEZ to purse seine fishing. With few data to suggest any potential harmful bycatch or gear conflicts, this action provides additional opportunity for purse seiners to fish for Pacific bluefin tuna in those years when they travel in fishable schools off Oregon and Washington, and could raise a potential for purse seining for albacore in the northwest portion of the EEZ.

Purse seine fishers targeting HMS from any state can fish anywhere in the EEZ, although there has been little interest in such fishing off Oregon and Washington.