AMENDED SECTIONS

of the

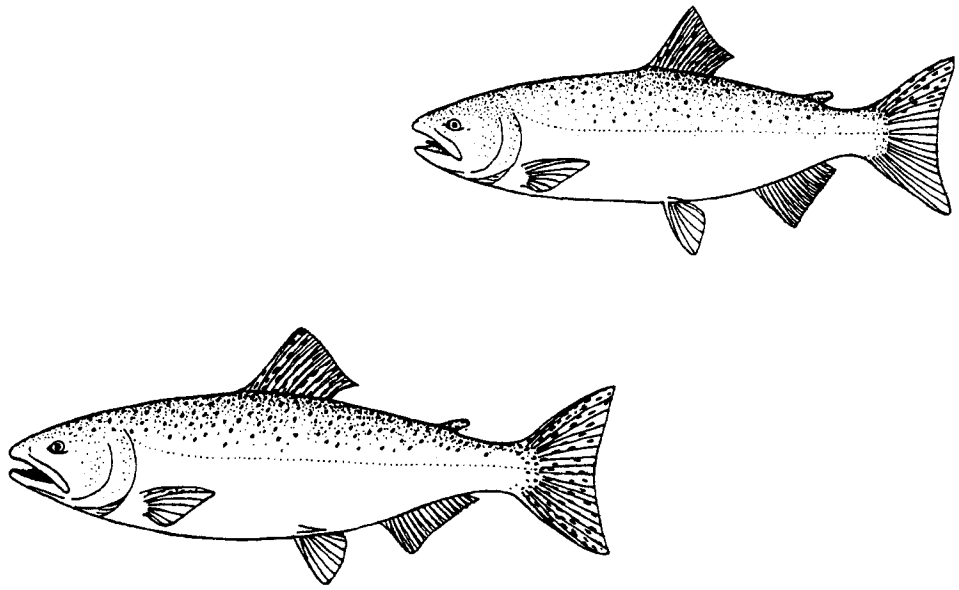
PACIFIC COAST SALMON PLAN

FISHERY MANAGEMENT PLAN FOR

COMMERCIAL AND RECREATIONAL SALMON FISHERIES

OFF THE COASTS OF WASHINGTON, OREGON AND CALIFORNIA

AS REVISED BY AMENDMENT 14



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This document contains the complete text of the amended portions of the *Pacific Coast Salmon Plan* as amended by Amendment 14 and adopted by the Council in March 1999. It has been submitted for approval and implementation by the Secretary of Commerce.

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LIST OF ACRONYMS AND ABBREVIATIONS

ASETF	Anadromous Salmonid Environmental Task Force
Council	Pacific Fishery Management Council
EEZ	exclusive economic zone (three to 200 miles offshore)
EIS	Environmental Impact Statement
ESA	Endangered Species Act
EFH	Essential fish habitat
ESU	Evolutionarily significant unit
FAB	Fisheries Advisory Board (established in U.S. v. Washington)
FMP	fishery management plan
FR	Federal Register
FRAM	Fishery Regulation Assessment Model
KRSMG	Klamath River Salmon Management Plan
KRTT	Klamath River Technical Team
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MSP	maximum sustainable production
MSY	maximum sustainable yield
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPPA	Northwest Power Planning Act
OCN	Oregon coastal natural coho
ODFW	Oregon Department of Fish and Wildlife
OPI	Oregon Production Index
OY	optimum yield
PFMC	Pacific Fishery Management Council
PSC	Pacific Salmon Commission
RFA	Regulatory Flexibility Act
RIR	Regulatory Impact Review
SAS	Salmon Advisory Subpanel
Secretary	Secretary of Commerce
SEIS	Supplemental Environmental Impact Statement
SFA	Sustainable Fisheries Act
SRFCRT	Sacramento River Fall Chinook Review Team
SSC	Scientific and Statistical Committee
STT	Salmon Technical Team
TAC	total allowable catch
TALFF	total allowable level of foreign fishing
WDF	Washington Department of Fisheries
WDFW	Washington Department of Fish and Wildlife

INTRODUCTION

This document is the *Pacific Coast Salmon Plan* of the Pacific Fishery Management Council (Council or PFMC) as revised and updated in 1998 for implementation in 1999. It guides management of commercial and recreational salmon fisheries off the coasts of Washington, Oregon, and California.

Since 1977, salmon fisheries in the exclusive economic zone (EEZ) (three to 200 miles offshore) off Washington, Oregon, and California have been managed under salmon fishery management plans (FMP) of the Council. Creation of the Council and the subsequent development and implementation of these plans were initially authorized under the Fishery Conservation and Management Act of 1976. This act, now known as the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), was most recently amended by the Sustainable Fisheries Act (SFA) in 1996. The plan presented in this document contains or references all the elements required for an FMP under the Magnuson-Stevens Act. It completely replaces the 1997 version of the *Pacific Coast Salmon Plan.*

The Council's first salmon FMP and its environmental impact statement (EIS) were issued to govern the 1977 salmon season. A new salmon management plan and EIS were issued in 1978 to replace the 1977 documents. To establish management measures from 1979 through 1983, the 1978 FMP was amended annually and published along with a supplemental EIS and Regulatory Impact Review/Regulatory Flexibility Analysis (RIR/RFA). This annual process was lengthy, complex and costly. It lacked a long-range perspective and was too cumbersome to allow for timely implementation of the annual regulations and efficient fishery management (PFMC 1984). Therefore, in 1984, the Council adopted a comprehensive framework amendment that was designed to end the need for annual plan amendments and supplemental EISs.

The comprehensive framework plan amendment of 1984 (Amendment 6) replaced the 1978 plan as the base FMP document and established a framework of fixed management objectives with flexible elements to allow annual management measures to be varied to reflect changes in stock abundance and other critical factors. Subsequently, at irregular intervals, the Council has developed various amendments to portions of the framework plan to address specific management issues raised by participants in the salmon management process or as necessary to respond to reauthorization of the original Fishery Conservation and Management Act of 1976. Each of the seven amendments adopted since implementation of the framework FMP in 1984 has been accompanied by an environmental assessment.

The primary amendment issues since 1984 have included specific spawner escapement goals for Oregon coastal natural (OCN) coho and Klamath River fall chinook (Amendments 7, 9, 11, and 13), non-Indian harvest allocation (Amendments 7, 9, and 10), inseason management criteria (Amendment 7), habitat (Amendment 8), safety (Amendment 8), a definition of overfishing (Amendment 10), and management objectives for stocks listed under the Endangered Species Act (ESA) (Amendment 12).

In 1996, as part of Amendment 12, the Council made an editorial update to the framework FMP that included incorporating all of the amendments after 1984 into the *Pacific Coast Salmon Plan* (PFMC 1997b). Subsequently, the Council modified the OCN coho management goals under Amendment 13 in 1997. The current salmon FMP includes changes through Amendment 14, an extensive revision of the FMP primarily to respond to the SFA and to improve the readability and organization of the plan. Table 1 contains a complete listing of the issues in each amendment through Amendment 14.

This document contains or references all the necessary elements of the current salmon FMP. Appendix A contains the complete description of essential fish habitat, Appendix B provides a description of the fishery, and Appendix C , which will always be the Council's most current annual review of the ocean fisheries, provides an annual updating of the fishery information. The reader may wish to refer to the original salmon FMP and individual amendment documents for more background and explanatory information, including the environmental impact assessments, EISs, and examples of management options not adopted by the Council.

TABLE 1. Record of salmon FMP documents.

DOCUMENT	CONTENT SUMMARY
Final 1977 Plan	Initial FMP/EIS document for the 1977 salmon season.
Final 1978 Plan (43 FR 29791, July 11, 1978) Effective July 11, 1978[a/]	Initial, comprehensive FMP/EIS document. Amended each year to establish annual management measures for 1979-1983.
Final Framework Amendment (49 FR 43679, Oct. 31, 1984) Effective Nov. 25, 1984[b/]	Comprehensive amendment and SEIS that replaced the 1978 Plan as a multi-year FMP document.
Technical amendments:	1) Spawner escapement goals, procedures to modify spawner goals and inseason modification of daily bag limits (50 FR 812, Jan. 7, 1985) 2) Inseason rescission of automatic closures (50 FR 4977, Feb. 5, 1985) 3) Season opening and closing dates (50 FR 42529, Oct. 21, 1985)
Amendment 7 (52 FR 4146, Feb. 10, 1987) Effective Mar. 8, 1987	1) Sliding scale OCN coho spawner escapement goal 2) Inseason management actions and procedures 3) Coho harvest allocation south of Cape Falcon
Amendment 8 (53 FR 30285, Aug. 11, 1988) Effective Aug. 8, 1988; required no implementing regulations	1) Habitat policy and objectives 2) Consideration of temporary season adjustments for vessels precluded from harvesting due to unsafe weather
Amendment 9 (54 FR 19185, May 4, 1989) Effective May 1, 1989; except radio report section implemented July 13, 1989 (54 FR 29730, July 14, 1989)	1) Klamath River fall chinook harvest rate spawner escapement goal 2) Commercial/recreational harvest allocation north of Cape Falcon 3) Inseason notice procedures 4) Steelhead management intent 5) Radio reporting requirements for commercial fishers 6) Deleted limitations on season opening and closing dates
Clarifying letter:	to Mr. Rolland Schmitten re harvest allocation, Issue 2; Feb. 27, 1989
Technical amendment:	Minor modification of Klamath spawner goal based on Council recommendation, March 8, 1989 (54 FR 19800, May 8, 1989 and 59 FR 23000, May 4, 1994)
Amendment 10 (56 FR 26774, June 11, 1991) Effective July 11, 1991	1) Inseason reallocation objectives for commercial and recreational fisheries south of Cape Falcon 2) Criteria guiding non-Indian catch allocation north of Cape Falcon, especially concerning recreational port allocation 3) Definition of overfishing
Amendment 11 (59 FR 23013, May 4, 1994) Effective April 29, 1994	OCN coho spawner escapement goal of 42 spawners/mile, incidental exploitation rate of 20% or less on OCN coho at low stock sizes and sport coho harvest allocation criteria at low harvest levels
Clarifying letter:	to Mr. Gary Smith re incidental harvest and sport allocation; Apr. 15, 1994
Technical amendment:	Minor modification of Klamath spawner goal to meet tribal allocation based on Council recommendation of April 11, 1996 (61 FR 20186, May 6, 1996)
Amendment 12 (62 FR 35450, July 1, 1997) Effective July 31, 1997	1) Procedures governing retention of salmon bycatch in trawl nets 2) Management objectives for listed salmon species 3) Update of the salmon FMP (no change in management objectives)
Amendment 13 (64 FR 26328, May 14, 1999) Effective June 14, 1999)	Revision of management objectives for OCN coho to increase the probability of recovery and to prevent listing under the ESA.
Amendment 14 (Adopted March 12, 1999; implementation pending)	1) Update of the EIS and editorial improvements in the plan 2) New requirements of the SFA, including essential fish habitat, optimum yield, overfishing and bycatch 3) Clarification of the stocks managed and management objectives 4) Minor revision of allocation north of Cape Falcon to allow more harvest in selective fisheries

a/ Implemented by emergency regulation on April 14, 1978 (43 FR 15629) and May 24, 1978 (43 FR 22214).
b/ Implemented by emergency regulation on May 3, 1984 (49 FR 18853; May 3, 1984).

1 WHAT THE PLAN COVERS

> *"It is therefore declared to be the purposes of the Congress in this Act–(1) to take immediate action to conserve and manage the fishery resources found off the coasts of the United States, and the anadromous species and Continental Shelf Fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone . . ., and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species and Continental Shelf fishery resources . . .(7) to promote the protection of essential fish habitat in the review of projects conducted under Federal permits, licenses, or other authorities that affect or have the potential to affect such habitat."*
>
> *Magnuson-Stevens Act, § 2*(b)

This fishery management plan (FMP) covers the coastwide aggregate of natural and hatchery salmon species that is contacted by salmon fisheries in the exclusive economic zone (EEZ) off the coasts of Washington, Oregon, and California. Salmon of U.S. and Canadian origin are included except when specific species are managed in those waters by another management entity with primary jurisdiction (i.e., sockeye and pink salmon by the Fraser River Panel of the Pacific Salmon Commission (PSC) in the Fraser River Panel Area (U.S.) between 49°N latitude and 48°N latitude). In addition, the plan contains requirements and recommendations with regard to essential fish habitat for the managed stocks as described in Chapter 4 and Appendix A. The essential fish habitat includes marine areas within the EEZ as well as estuarine and freshwater habitat within the internal waters of Washington, Oregon, California, and Idaho.

Chinook or king salmon (*Oncorhynchus tshawytscha*) and coho or silver salmon (*O. kisutch*) are the main species caught in Council-managed ocean salmon fisheries. In odd-numbered years, catches of pink salmon (*O. gorbuscha*) can also be significant, primarily off Washington and Oregon (Salmon Technical Team [STT] 1999b). Therefore, while all species of salmon fall under the jurisdiction of this plan, it currently contains fishery management objectives only for chinook, coho, pink (odd-numbered years only), and any salmon species listed under the Endangered Species Act (ESA) that is measurably impacted by Council fisheries. To the extent practicable, the Council has partitioned this coastwide aggregate of chinook, coho and pink salmon into various stock components with specific conservation objectives. A detailed listing of the individual stocks or stock complexes managed under this plan, along with pertinent stock information and conservation objectives, is provided in Chapter 3.

The plan contains no fishery management objectives for even-numbered year pink salmon, chum (*O. keta*), sockeye (*O. nerka*), steelhead (*O. mykiss*), or sea-run cutthroat (*O. clarki*). The Council does not manage fisheries for these species and incidental catches are inconsequential (low hundreds of fish each year) to very rare (Appendix A of STT 1997). In the event this situation should change, management objectives for these species could be developed and incorporated by plan amendment. The incidental harvest of these salmon species can be allowed or restricted under existing federal fishery regulations.

2 ACHIEVING OPTIMUM YIELD

"Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery"
Magnuson-Stevens Act, National Standard I

This chapter explains the Council's means of meeting the requirements of the Magnuson-Stevens Act to achieve the optimum yield from the salmon fishery.

2.1 THEORY

"Optimum yield" means 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 protection of marine ecosystems. It is prescribed on the basis of the maximum sustainable yield (MSY) from the fishery, reduced by any relevant economic, social, or ecological factors, and provides for rebuilding of an overfished stock, taking into account the effects of uncertainty and management imprecision.

"MSY" is a theoretical concept that, for the purposes of the Magnuson-Stevens Act, is defined as the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological and environmental conditions. In Council management of naturally spawning salmon stocks, MSY is usually approached in terms of annually achieving the number of adult spawners (conservation objective) associated with this goal. Often, data are insufficient to directly estimate the number of spawners resulting in MSY. In these cases, the Council may use MSY proxies derived from more general estimates of productive capacity and implement harvest strategies that may be expected to result in a long-term average catch which approximates MSY.

MSY can be a difficult concept to use for management purposes for several reasons. First, it is based on a long-term average that can generally only be calculated from historic data which may not accurately reflect the MSY under present or future ecological and environmental conditions. When negative changes in environmental conditions (both natural and human caused) reduce a stock's productivity and prevent it from attaining historic MSY levels (even with no harvest impacts), it is difficult to know whether this is simply normal variation or a long-term change. In addition, uncertainties in run-size projections, fishery impacts and overall management imprecision combine to complicate the estimation and achievement of MSY. To deal with this uncertainty, the Council may establish conservation objectives based on conservative harvest rates with minimum spawner escapement provisions set at the estimated MSY or MSY proxy level, or set the conservation objective at maximum sustainable production (MSP) rather than MSY (e.g., Puget Sound chinook stocks). In some cases of limited information or significant changes in habitat conditions, the Council may use stepped harvest rates with very limited exploitation rates at low population sizes and/or spawner floors to support conservation and recovery of the stocks while providing data from which to better ascertain the probable MSY or MSY proxy. Conservation objectives for Oregon coastal natural (OCN) coho and Klamath River fall chinook are examples of this kind of management.

2.2 IMPLEMENTATION

The optimum yield to be achieved for species covered by this plan is the total salmon catch and mortality (expressed in numbers of fish) resulting from fisheries within the EEZ adjacent to the States of Washington, Oregon, and California, and in the waters of those states (including internal waters), and Idaho, that, to the greatest practical extent within pertinent legal constraints, fulfill the plan's conservation and harvest objectives. On an annual basis, the Council recommends management measures to achieve the stock conservation objectives for each stock or stock complex, based on the estimated MSY, MSY proxy, MSP, or rebuilding schedule (Chapter 3), while simultaneously seeking to fulfill, to the extent practicable, the harvest and allocation objectives (Chapter 5) that reflect the Council's social and economic considerations. The subsequent catch and mortality resulting under the Council's management recommendations will embody the optimum yield and will be equal to or less than MSY from the fishery. The level of total allowable harvest, the relative harvest levels in various management areas, and the species and stock

composition of optimum yield will vary annually, depending on the relative abundance and distribution of the various stocks and contingencies in allocation formulas.

The Council's annual ocean fishery reviews and preseason reports (STT 1999a, 1999b, 1999c, and 1999d) assess and specify the present and historical range of harvests and harvest related mortalities that represent the optimum yield. A similar range of yields can be expected in the future, though further stock declines and listings under the ESA could result in even lower levels than experienced prior to 1999.

3 CONSERVATION

"Conservation and management measures shall be based upon the best scientific information available."

Magnuson-Stevens Act, National Standard 2

3.1 SALMON STOCK CONSERVATION OBJECTIVES

"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"

. Magnuson-Stevens Act, National Standard 3

To achieve optimum yield, prevent overfishing, and assure rebuilding of salmon stocks whose abundance has been depressed to an overfished level, this plan establishes, to the extent practicable, conservation objectives to perpetuate the coastwide aggregate of salmon stocks covered by the plan (Chapter 1). The Council's stock conservation objectives (to be achieved annually) and other pertinent stock management information are contained in Table 3-1 (following Section 3.2). Specific objectives are listed for natural and hatchery stocks that are part of the Council's preseason fishery option development process (Chapter 9), including all stocks listed under the federal ESA. The objectives may be applicable to a single stock or a complex of interrelated stocks (those sharing similarities in life-history traits, geographic distribution, habitat preferences and genetic characteristics). Stocks that are not included in the preseason analyses may lack specific conservation objectives because the stock is not significantly impacted by ocean fisheries or insufficient management information is available from which to assess ocean fishery impacts directly. In the latter case, the conservation objective for a managed stock may serve to provide for the conservation of a closely related stock unless, or until, more specific management information can be developed.

3.1.1 Basis

The Council's conservation objectives for natural stocks may (1) be based on estimates for achieving MSY, an MSY proxy, or MSP, or (2) represent special data gathering or rebuilding strategies to approach MSY and to eventually develop MSY or MSP objectives. The objectives have generally been developed through extensive analysis by the fishery management entities with direct management authority for the stock, or through joint efforts coordinated through the Council, or with other state, tribal or federal entities. Most of the objectives for stocks north of Cape Falcon have been included in U.S. District Court orders. Under those orders for Washington coastal and Puget Sound stocks (U.S. v. Washington, 626 F. Supp. 1405 [1985] and Hoh v. Baldrige No. 81-742 [R] C), the treaty tribes and WDFW may agree to annual spawner targets that differ from the MSP or MSY objectives. Details of the conservation objectives are available in PFMC (1984), in individual amendment documents (see Table 1 in the Introduction), and as referenced in Table 3-1.

The Council's fixed conservation objectives are generally expressed in terms of an annual fishery escapement believed to be optimum for producing MSY over the long-term. The escapement objective may be (1) a specific number or a range for the desired number of adult spawners (spawner escapement), or (2) a specific number or range for the desired escapement of a stock from the ocean or at another particular location, such as a dam, that may be expected to result in the target number of spawners. The current data gathering and rebuilding objectives may be expressed as fixed or stepped exploitation or harvest rates and may include spawner floors or severely reduced harvest rates at low abundance levels (e.g., Klamath River fall chinook), or as special requirements provided in National Marine Fisheries Service (NMFS) jeopardy or rebuilding standards for stocks listed under the ESA.

3.1.2 Changes or Additions

Conservation objectives are fixed measures of the FMP intended to provide the necessary guidance during the course of the annual preseason planning process to establish salmon fishing seasons that achieve optimum yield. However, changes or additions to the stock complexes and objectives for most natural

stocks may be made without plan amendment if a comprehensive technical review of the best scientific information available provides conclusive evidence that, in the view of the Salmon Technical Team, Scientific and Statistical Committee (SSC), and the Council, justifies a modification. An exception is the 35,000 natural spawner floor for Klamath River fall chinook which may only be changed by FMP amendment. The Council may change objectives for hatchery stocks upon the recommendation of the pertinent federal, state, and tribal management entities. Federal court-ordered changes in objectives will also be accommodated without a plan amendment. Insofar as possible, changes for natural stocks will only be reviewed and approved within the schedule established for salmon estimation methodology reviews (completed at the November meeting prior to the season in which they are effective) and apart from the preseason planning process. The applicable annual objectives of Council-adopted rebuilding programs developed in response to an overfishing concern or the requirements of new jeopardy standards promulgated by NMFS under the ESA may be employed without plan amendment to assure timely implementation. All of these changes will be documented during the Council's preseason planning process.

The Council considers established conservation objectives to be stable and a technical review of biological data must provide substantial evidence that a modification is necessary. The Council's approach to conservation objectives purposely discourages frequent changes for short-term economic or social reasons at the expense of long-term benefits from the resource. However, periodic review and revision of established objectives is anticipated as additional data become available for a stock or stock complex.

3.2 OVERFISHING CRITERIA

> *"Any fishery management plan . . . shall . . . specify objective and measurable criteria for identifying when the fishery . . . is overfished . . . and, . . . contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery;"*
> *Magnuson-Stevens Act, § 303(a)(10)*

> *"The terms overfishing and overfished mean a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce the maximum sustainable yield on a continuing basis."*
> *Magnuson-Stevens Act, § 3(29)*

In applying the Magnuson-Stevens Act definition of overfishing to salmon fisheries and establishing criteria by which to identify it, the Council must consider the uncertainty and theoretical aspects of MSY as well as the complexity and variability unique to naturally producing salmon populations. These unique aspects include the interaction of a short-lived species with frequent, sometimes protracted, and often major variations in both the freshwater and marine environments. These variations may act in unison or in opposition to affect salmon productivity in both positive and negative ways. In addition, variations in natural populations may sometimes be difficult to measure due to masking by artificially produced salmon.

3.2.1 General Application to Salmon Fisheries

In setting criteria from which to judge the conservation status of salmon stocks, the unique life history of salmon must be considered. Chinook, coho, and pink salmon are short-lived species (generally two to six years) that reproduce only once shortly before dying. Spawning escapements of coho and pink salmon are dominated by a single-year class and chinook spawning escapements may be dominated by no more than one or two-year classes. The abundance of year classes can fluctuate dramatically with combinations of natural and human-caused environmental variation. Therefore, it is not unusual for a healthy and relatively abundant salmon stock to produce occasional spawning escapements which, even with little or no fishing impacts, may be significantly below the long-term average associated with the production of MSY. This phenomenon has been observed in recent years for numerous salmon stocks, including Klamath River fall chinook and several Washington coho stocks.

Numerous West Coast salmon stocks have suffered, and continue to suffer, from an onslaught of nonfishing activities that severely reduce natural survival by such actions as the elimination or degradation of freshwater spawning and rearing habitat. The consequence of this man-caused, habitat-based variation is two fold. First, these habitat changes increase large scale variations in stock productivity and associated

stock abundances, which in turn complicate the overall determination of MSY and the specific assessment of whether a stock is producing at or below that level. Secondly, as the productivity of the freshwater habitat is diminished, the benefit of further reductions in fishing mortality to improve stock abundance decreases. Clearly, the failure of several stocks managed under this FMP to produce at an historic or consistent MSY level has little to do with current fishing impacts and often cannot be rectified with the cessation of all fishing.

To address the requirements of the Magnuson-Stevens Act to clearly identify when a stock may be approaching an overfished condition or is overfished, the Council has established two separate criteria based on a stock's failure to meet its conservation objective. These criteria are denoted as a "conservation alert" and an "overfishing concern". The criteria for these two categories are based on the unique life history of salmon and the large variations in annual stock abundance due to numerous environmental variables. They also take into account the uncertainty and imprecision surrounding many estimates of MSY, fishery impacts, and spawner escapements. In recognition of the unique salmon life history, the criteria differ somewhat from the general guidance in the National Standard Guidelines (§ 600.310), but equal or exceed them in addressing the overfishing issue as it relates to salmon.

3.2.2 Conservation Alert

> *"A fishery shall be classified as approaching a condition of being overfished if, based on trends in fishing effort, fishery resource size, and other appropriate factors, the Secretary estimates that the fishery will become overfished within two years."*
>
> *Magnuson-Stevens Act, § 304(e)(1)*

To anticipate and react to potential stock declines which might lead to overfishing, the Council has established a conservation alert process with criteria and actions as described below.

3.2.2.1 Criteria

A conservation alert is triggered during the annual preseason process (Chapter 9) if a natural stock or stock complex, listed in Table 3-1, is projected to fall short of its conservation objective (MSY, MSY proxy, MSP, or floor in the case of some harvest rate objectives [e.g., 35,000 natural Klamath River fall chinook spawners]). While a projected one-year shortfall may be of little biological concern, it may also represent the beginning of production problems and is worthy of note to help prevent future stock decline.

3.2.2.2 Council Action

For all natural stocks which meet the conservation alert criteria, the Council will notify pertinent fishery and habitat managers, advising that the stock may be temporarily depressed or approaching an overfishing concern (depending on its recent conservation status), and request that state and tribal fishery managers identify the probable causes, if known. If the stock in question has not met its conservation objective in the previous two years, the Council will request the pertinent state and tribal managers to do a formal assessment of the primary factors leading to the shortfalls and report their conclusions and recommendations to the Council no later than the March meeting prior to the next salmon season.

The Council will take the following actions for stocks which trigger a conservation alert that do not qualify as exceptions under Section 3.2.4 (see Table 3-1):

1. Close salmon fisheries within Council jurisdiction which impact the stock.

2. In the case of Washington coastal and Puget Sound salmon stocks and fisheries managed under U.S. District Court orders, the Council may allow fisheries which meet annual spawner targets developed through relevant U.S. v. Washington, Hoh v. Baldrige, and subsequent U.S. District Court ordered processes and plans, which may vary from the MSY or MSP conservation objectives. Other than the exceptions noted above, the Council may not recommend ocean salmon fisheries which are expected to trigger a conservation alert.

If postseason estimates confirm that a stock conservation objective is not met, a rebuilding program for the following year is implicit in the conservation objective since it is based on annually meeting MSY or MSP. In addition, the Council reviews stock status annually and, where needed, identifies actions required to improve estimation procedures and correct biases. Such improvements provide greater assurance that objectives will be achieved in future seasons. Consequently, a remedial response is built into the preseason planning process to address excessive fishing mortality levels relative to the conservation objective of a stock.

The Council does not believe that a one year departure from the MSY/MSP spawner objective for salmon affects the capacity of a stock to produce MSY over the long-term (i.e., does not constitute overfishing as defined by the Magnuson-Stevens Act). However, the Council's use of a conservation alert and the rebuilding effect of the conservation objectives provides for sound resource management and responds to the concept in the National Standard Guidelines for action to address overfishing concerns in any one year. The Council's conservation objectives which are used to trigger a conservation alert are generally based on MSY or MSP rather than a minimum stock size threshold. In this respect, the Council's management approach is more conservative than recommended by the National Standard Guidelines.

3.2.3 Overfishing Concern

> *"For a fishery that is overfished, any fishery management plan, amendment, or proposed regulations . . . for such fishery shall–(A) specify a time period for ending overfishing and rebuilding the fishery that shall–(I) be as short as possible, taking into account the status and biology of any overfished stocks of fish, the needs of the fishing communities, recommendations by international organizations in which the United States participates, and the interaction of the overfished stock within the marine ecosystem; and (ii) not exceed 10 years, except in cases where the biology of the stock of fish, other environmental conditions, or management measures under an international agreement in which the United States participates dictate otherwise. . ."*
>
> *Magnuson-Stevens Act, § 304(e)(4)*

The Magnuson-Stevens Act requires overfishing be ended and stocks rebuilt in as short a period as possible and, depending on other factors, no longer than ten years. For healthy salmon stocks which may experience a sudden reduction in production and/or spawner escapement, the limitation on fishing impacts provided by the Council's MSY or MSY proxy conservation objectives provide a stock rebuilding plan that should be effective within a single salmon generation (two years for pinks, three years for coho, and three to five years for chinook). However, additional actions may be necessary to prevent overfishing of stocks suffering from chronic depression due to fishery impacts outside Council authority or from habitat degradation or long-term environmental fluctuations. Such stocks may meet the criteria invoking the Council's overfishing concern.

3.2.3.1 Criteria

The Council's criteria for an overfishing concern are met if, in three consecutive years, the postseason estimates indicate a natural stock has fallen short of its conservation objective (MSY, MSP, or spawner floor as noted for some harvest rate objectives) in Table 3-1. It is possible that this situation could represent normal variation, as has been seen in the past for several previously referenced salmon stocks which were reviewed under the Council's former overfishing definition. However, the occurrence of three consecutive years of reduced stock size or spawner escapements, depending on the magnitude of the short-fall, could signal the beginning of a critical downward trend (e.g., Oregon coastal coho) which may result in fishing that jeopardizes the capacity of the stock to produce MSY over the long term if appropriate actions are not taken to ensure the automatic rebuilding feature of the conservation objectives is achieved.

3.2.3.2 Assessment

When an overfishing concern is triggered, the Council will direct its STT to work with state and tribal fishery managers to complete an assessment of the stock within one year (generally, between April and the March Council meeting of the following year). The assessment will appraise the actual level and source of fishing

impacts on the stock, consider if excessive fishing has been inadvertently allowed by estimation errors or other factors, identify any other pertinent factors leading to the overfishing concern, and assess the overall significance of the present stock depression with regard to achieving MSY on a continuing basis.

Depending on its findings, the STT will recommend any needed adjustments to annual management measures to assure the conservation objective is met, or recommend adjustments to the conservation objective which may more closely reflect the MSY or ensure rebuilding to that level. Within the constraints presented by the biology of the stock, variations in environmental conditions, and the needs of the fishing communities, the STT recommendations should identify actions that will recover the stock in as short a time as possible, preferably within ten years or less, and provide criteria for identifying stock recovery and the end of the overfishing concern. The STT recommendations should cover harvest management, potential enhancement activities, hatchery practices, and any needed research. The STT may identify the need for special programs or analyses by experts outside the Council advisors to assure the long-term recovery of the salmon population in question. Due to a lack of data for some stocks, environmental variation, economic and social impacts, and habitat losses or problems beyond the control or management authority of the Council, it is likely that recovery of depressed stocks in some cases could take much longer than ten years.

In addition to the STT assessment, the Council will direct its Habitat Steering Group (HSG) to work with federal, state, local, and tribal habitat experts to review the status of the essential fish habitat affecting this stock and, as appropriate, provide recommendations to the Council for restoration and enhancement measures within a suitable time frame.

3.2.3.3 Council Action

Following its review of the STT report, the Council will specify the actions that will comprise its immediate response for ensuring that the stock's conservation objective is met or a rebuilding plan is properly implemented and any inadvertent excessive fishing within Council jurisdiction is ended. The Council's rebuilding plan will establish the criteria that identify recovery of the stock and the end of the overfishing concern. In some cases, it may become necessary to modify the existing conservation objective/rebuilding plan to respond to habitat or other long-term changes. Even if fishing is not the primary factor in the depression of the stock or stock complex, the Council must act to limit the exploitation rate of fisheries within its jurisdiction so as not to limit recovery of the stock or fisheries, or as is necessary to comply with ESA jeopardy standards. In cases where no action within Council authority can be identified which has a reasonable expectation of providing benefits to the stock unit in question, the Council will identify the actions required by other entities to recover the depressed stock. Upon review of the report from the HSG, the Council will take actions to promote any needed restitution of the identified habitat problems.

For those fishery management actions within Council authority and expertise, the Council may change analytical or procedural methodologies to improve the accuracy of estimates for abundance, harvest impacts, and MSY escapement levels, and/or reduce ocean harvest impacts when shown to be effective in stock recovery. For those causes beyond Council control or expertise, the Council may make recommendations to those entities which have the authority and expertise to change preseason prediction methodology, improve habitat, modify enhancement activities, and re-evaluate management and conservation objectives for potential modification through the appropriate Council process.

3.2.3.4 End of Overfishing Concern

The criteria for determining the end of an overfishing concern will be included as a part of any rebuilding plan adopted by the Council. Additionally, an overfishing concern will be ended if the STT stock analysis provides a clear finding that the Council's ability to affect the overall trend in the stock abundance through harvest restrictions is virtually nil under the "exceptions" criteria below for natural stocks.

3.2.4 Exceptions

> *"Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches."*
> *Magnuson-Stevens Act, National Standard 6*

This plan contains three exceptions to the application of overfishing criteria and subsequent Council actions for stocks or stock complexes with conservation objectives in Table 3-1: (1) hatchery stocks, (2) stocks for which Council management actions have inconsequential impacts, and (3) stocks listed under the ESA.

3.2.4.1 Hatchery Stocks

Salmon stocks important to ocean fisheries and comprised exclusively of hatchery production generally have conservation objectives expressed as an egg-take or the number of spawners returning to the hatchery rack to meet program objectives. This plan recognizes these objectives and strives to meet them. However, these artificially produced stocks generally do not need the protection of overfishing criteria and special Council rebuilding programs to maintain long-term production. Because hatchery stocks can generally sustain significantly higher harvest exploitation rates than natural stocks, ocean fisheries rarely present a threat to their long-term survival. In addition, it is often possible to make temporary program modifications at hatcheries to assure adequate production to sustain the stock during periods of low abundance (e.g., sharing brood stock with other hatcheries, arranging for trapping at auxiliary sites, etc.). If specialized hatchery programs are approved in the future to sustain listed salmon stocks, the rebuilding programs would be developed and followed under the ESA .

3.2.4.2 Natural Stocks With Minimal Harvest Impacts in Council-Managed Fisheries

Several natural stock components identified within this FMP are subject to minimal harvest impacts in Council fisheries because of migration timing and/or distribution. As a result, the Council's ability to affect the overall trend in the abundance of these components through harvest restrictions is virtually nil. Components in this category are identified by a cumulative adult equivalent exploitation rate of less than five percent in ocean fisheries under Council jurisdiction during base periods utilized by the fishery regulation assessment models (1979-1982 for chinook and 1979-1981 for coho). Council action for these components, when a conservation alert or an overfishing concern are triggered, will consist of confirming negligible impacts of proposed Council fisheries, identifying factors which have led to the decline or low abundance (e.g., fishery impacts outside Council jurisdiction, or degradation or loss of essential fish habitat), and monitoring of abundance trends and total harvest impact levels. Council action will focus on advocating measures to improve stock productivity, such as reduced interceptions in non-Council-managed fisheries, and improvements in spawning and rearing habitat, fish passage, flows, and other factors affecting overall stock survival.

3.2.4.3 Stocks Listed Under the Endangered Species Act

The Council regards stocks listed as endangered or threatened under the ESA as a third exception to the application of overfishing criteria of the Magnuson-Stevens Act. The ESA requires federal agencies whos actions may jeopardize listed salmon to consult with NMFS. Because NMFS implements ocean harvest regulations, it is both the action and consulting agency for actions taken under the FMP. To ensure there is no jeopardy, NMFS conducts internal consultations with respect to the effects of ocean harvest on listed salmon. The Council implements NMFS' guidance as necessary to avoid jeopardy, as well as in recovery plans approved by NMFS. As a result of NMFS' consultation, an incidental take statement may be issued which authorizes take of listed stocks under the FMP that would otherwise be prohibited under the ESA.

The Council believes that the requirements of the ESA are sufficient to meet the intent of the Magnuson-Stevens Act overfishing provisions. Those provisions are structured to maintain or rebuild stocks to levels at or above MSY and require the Council to identify and develop rebuilding plans for overfished stocks. For many fish species regulated under the Magnuson-Stevens Act, the elimination of excess fishing pressure is often the sole action necessary to rebuild depressed stocks. This is, however, not the case for many salmon stocks and, in particular, for most listed populations.

Although harvest has certainly contributed to the depletion of West Coast salmon populations, the primary reason for their decline has been the degradation and loss of freshwater spawning, rearing and migration habitats. The quality and quantity of freshwater habitat are key factors in determining the MSY of salmon populations. The Council has no control over the destruction or recovery of freshwater habitat nor is it able to predict the length of time that may be required to implement the habitat improvements necessary to recover stocks. While the Council could theoretically establish new MSY escapement goals consistent with the limited or degraded habitat available to listed species, adoption of revised goals would potentially result in an ESA-listed stock being classified as producing at MSY and; therefore, not overfished under the Magnuson-Stevens Act. The Council believes that the intent of the ESA and the Magnuson-Stevens Act is the recovery of stocks to MSY levels associated with restored habitat conditions.

The Council considers the jeopardy standards and recovery plans developed by NMFS for listed populations as interim rebuilding plans. Although NMFS' jeopardy standards and recovery plans may not by themselves recover listed populations to historical MSY levels within ten years, they are sufficient to stabilize populations until freshwater habitats and their dependent populations can be restored and estimates of MSY developed consistent with recovered habitat conditions. As species are delisted, the Council will establish conservation objectives with subsequent overfishing criteria and manage to maintain the stocks at or above MSY levels.

3.3 SUPPLEMENTARY CONSERVATION INFORMATION

3.3.1 Endangered Species Act Listings

Since 1990, West Coast salmon fisheries have been modified to accommodate special requirements for the protection of salmon species listed under the federal ESA. The ESA listing of a salmon population may have profound consequences for the management of Council mixed-stock ocean fisheries since listed populations are often incidentally harvested with more abundant healthy populations. As additional stocks of salmon have become listed, the Council's preseason process has increasingly focused on protecting listed stocks. In applying the ESA to Pacific salmon, NMFS determined that a population segment of a salmon species must represent an evolutionarily significant unit (ESU) of that species in order to be eligible for listing. ESUs are characterized by their reproductive isolation and contribution to the genetic diversity of the species as a whole. NMFS establishes jeopardy standards for listed ESUs which specify levels of incidental take that are not likely to jeopardize the continued existence of the ESU.

The Council must meet or exceed the requirements of the ESA which is other applicable law. In addition to the stocks and conservation objectives in Table 3-1, the Council will manage all species listed under the ESA consistent with NMFS consultation standards or recovery plans to meet immediate conservation needs and the long-term recovery of the species. These standards are provided annually to the Council by NMFS at the start of the preseason planning process. In so far as is practical while not compromising its ability to meet the requirements of the ESA, NMFS will endeavor to provide opportunity for Council and peer review of any proposed consultation standards, or the objectives of recovery plans, well prior to their implementation. Such review would ideally commence no later than the last Council meeting in the year immediately preceding the first salmon season in which the standards would be implemented.

Table 3-2 summarizes the relationships of the individual stocks and stock units managed under the FMP to the ESUs identified by NMFS in the course of ESA status reviews. With the exception of some hatchery stocks, the stocks managed under the FMP are generally representative of the range of life history features characteristic of most ESUs. The managed stocks therefore serve as indicators for ESUs and provide the information needed to monitor fishery impacts on ESUs as a whole. In some cases, the information necessary for stock specific management is lacking, leaving some ESUs without adequate representation. For these ESUs, it will be necessary in the immediate future to use conservative management principles and the best available information in assessing impacts in order to provide necessary protection. In the meantime, the responsible management entities should implement programs to ensure that data are collected for at least one stock representative of each ESU. Programs should be developed to provide the information that will permit the necessary stock specific management within five years of completion of this amendment.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 1 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		- - - CHINOOK - - -	
CALIFORNIA CENTRAL VALLEY - All fall, late-fall, winter, and spring stocks of the Sacramento and San Joaquin Rivers and their tributaries. Management of this stock complex is based primarily on Sacramento River fall chinook, which includes a large hatchery component, and natural Sacramento River winter chinook which are listed as endangered. The San Joaquin system has been severely degraded by water development projects and pollution. Natural populations of spring chinook there have been extirpated and remaining spawning areas are utilized primarily by fall chinook which have comprised <10% of the total Central Valley fall run.			
Sacramento River Fall	122,000-180,000 natural and hatchery adult spawners (MSY proxy adopted 1984). This objective is intended to provide adequate escapement of natural and hatchery production for Sacramento and San Joaquin fall and late-fall stocks based on habitat conditions and average run-sizes as follows: Sacramento River 1953-1960; San Joaquin River 1972-1977 (ASETF 1979; PFMC 1984; SRFCRT 1994). The objective is less than the estimated basin capacity of 240,000 spawners (Hallock 1977), but greater than the 118,000 spawners for maximum production estimated on a basin by basin basis before Oroville and Nimbus Dams (Reisenbichler 1986).	Yes.	High abundance, large hatchery component. Single largest contributor to ocean fisheries off California, a significant contributor off southern and central Oregon, and present north into British Columbia. Primary impact south of Pt. Arena; considerable overlap with coastal and Klamath River fall chinook between Pt. Arena and Horse Mt.
Sacramento River Spring Threatened	NMFS jeopardy standard/recovery plan (not established at time of printing). No defined objective for ocean management prior to listing.	Indirectly. MSY criteria undefined. Assessment of ocean distribution and fishery impacts needed for ESA determination and to aid management. Present level of ocean fishery impacts limited by measures constraining harvest on Sacramento River winter and Klamath River fall chinook.	Severely depressed. Minor contributor to ocean fisheries off California, also known to occur off Oregon. Ocean fishery impacts primarily incidental to harvest of Sacramento River fall chinook and may be lower due to differences in run timing. MSY undefined but substantially reduced from historic levels by man-caused loss and deterioration of freshwater habitat.
Sacramento River Winter Endangered (1994)	NMFS jeopardy standard/recovery plan. Since 1996, an annual preseason objective of a 31% increase in the adult spawner replacement rate (equivalent to a 1.77 replacement rate) relative to the observed 1989-1993 mean rate of 1.35. Objective undefined prior to listing.	No. Listed stock, MSY criteria undefined. ESA jeopardy standard provides interim rebuilding program.	Depressed and listed, recent increase. Minor contributor to ocean fisheries south of Pt. Arena. Ocean fishery impacts incidental to harvest of Sacramento River fall chinook. Primary impact south of Pt. Arena.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 2 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		- - - CHINOOK - - -	
NORTHERN CALIFORNIA COAST - All fall and spring stocks of California streams north of the entrance to San Francisco Bay. Management of this stock complex is based primarily on meeting spawning escapements for natural fall chinook. Limited data is available except for the Klamath River. An assessment and monitoring program is under consideration by CDFG for stocks originating from the Smith, Eel, Mattole and Mad Rivers which might provide a more thorough management basis for the future. Significant water diversion problems in several drainages. In the Klamath River Basin, there is significant hatchery production of fall chinook and less so of spring chinook, resulting primarily from mitigation programs for dams constructed in both Upper Klamath and Trinity Rivers.			
Eel, Mattole, Mad, and Smith Rivers (Fall and Spring) Eel, Mattole and Mad River stocks - Threatened (1999)	Undefined. Indices of spawning abundance limited to one tributary of the Mad River and two tributaries of the Eel River. NMFS jeopardy standard/recovery plan for Eel, Mattole, and Mad River stocks not established at time of printing.	Indirectly. Data insufficient to define MSY criteria. CDFG developing an assessment and monitoring program. Conservation achieved by objective for Klamath River fall chinook which includes an inside allocation to tribal and sport fisheries which lowers ocean fishery impacts.	Depressed. Limited management data. Believed to occur in ocean fisheries off northern California and southern Oregon. Ocean fishery impacts incidental to fisheries for Sacramento and Klamath Rivers fall chinook. No preseason or postseason abundance estimates available.
Klamath River Fall (Klamath and Trinity Rivers)	33-34% of potential adult natural spawners, but no fewer than 35,000 naturally spawning adults in any one year. Brood escapement rate must average 33-34% over the long-term, but an individual brood may vary from this range to achieve the required tribal/nontribal annual allocation. Objective designed to allow a wide range of spawner escapements from which to develop an MSY objective or proxy while protecting the stock during prolonged periods of reduced productivity. Adopted 1988 based on Hubbell and Boydstun (1985); KRTT (1986); PFMC (1988); minor technical modifications in 1989 and 1996 (Table I-1). Natural spawners to maximize recruitment are estimated at 41,000 to 106,000 adults (Hubbell and Boydstun 1985).	Yes. A conservation alert or overfishing concern will be based on a failure to meet the 35,000 floor.	Abundance variable from high to depressed. Major contributor to ocean fisheries from Humbug Mt., OR to Horse Mt., CA (the KMZ) and to Klamath River tribal and recreational fisheries. Significant contributor to ocean fisheries from central Oregon to central California. Coastwide impacts are considered in meeting allocation requirements for Indian tribes with federally recognized fishing rights and the inland fishery. Specific management measures for this stock generally are implemented from Pigeon Pt., California to Florence, Oregon.
Klamath River Spring (Klamath and Trinity Rivers)	Undefined.	Indirectly. MSY criteria undefined. Productive potential protected by the objective for Klamath River fall chinook which includes an inside allocation to tribal and sport fisheries which lowers ocean fishery impacts.	Depressed. Believed to occur in ocean fisheries off northern California and southern Oregon (based on Trinity River Hatchery fish). Impacts incidental to ocean fisheries for Sacramento and Klamath Rivers fall chinook.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 3 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		- - - CHINOOK - - -	
OREGON COAST - All fall and spring stocks from Oregon streams south of the Columbia River. No preseason abundance estimates available. Management based primarily on an aggregate objective of 150,000 to 200,000 natural adult spawners (attainment of objective based on a postseason estimate of 60-90 natural adult spawners per mile in nine standard index streams). This objective is based on optimal escapement estimates for individual coastal rivers at habitat capacity (Thompson 1977). Lower end of the objective range is nearly twice the estimated MSY spawning escapement of 79,000 fall chinook adults based on stock recruit analysis (McGie 1982). Significant hatchery production also exists within the coastal streams.			
Southern Oregon (Aggregate of fall and spring stocks in all streams south of Elk River; Rogue River fall stock is used to indicate relative abundance and ocean contribution rates)	Unspecified portion of an aggregate 150,000 to 200,000 natural adult spawners for Oregon coast (Thompson 1977 and McGie 1982). ODFW developing specific conservation objectives for spring and fall stocks that may be implemented without plan amendment upon approval by the Council.	Yes, based on postseason estimates of <60 natural adult spawners per mile. Conservation also ensured by the objective for Klamath River fall chinook which includes a large inside allocation component that reduces ocean fishery exploitation rate in areas inhabited by these fish.	Medium to low abundance. Data limited except for Rogue River fall stock. Stocks migrate southerly or remain local and fall chinook contribute to ocean fisheries off northern California and Oregon, less so for spring stocks.
Central and Northern Oregon (Aggregate of fall and spring stocks in all streams from the Elk River to just south of the Columbia River)	Unspecified portion of an aggregate 150,000 to 200,000 natural adult spawners for Oregon coast (Thompson 1977 and McGie 1982). ODFW developing specific conservation objectives for spring and fall stocks that may be implemented without plan amendment upon approval by the Council.	Yes, based on postseason estimates of <60 natural adult spawners per mile.	Variable between high and medium abundance. Stocks migrate northward and contribute to ocean fisheries off British Columbia and SE Alaska and to a lesser degree off Washington and Oregon.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 4 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
	- - - CHINOOK - - -		
COLUMBIA RIVER BASIN - All pertinent fall, summer, and spring stocks of the Columbia River and its tributaries. Stocks within this complex are noted by area of origin: lower river (below Bonneville Dam), mid-river (Bonneville to McNary Dams), and upper river (above McNary Dam). Spawner escapement goals for these stocks are set through procedures of the U.S. District Court in U.S. v. Oregon and subsequent court orders. These goals are set forth in the Columbia River Fishery Management Plan and are recognized in the Council's conservation objectives. Annual inside fishery management planning activities are conducted within the Columbia River Compact and other state and tribal management forums. The Columbia River Compact, initially established by Oregon and Washington to jointly administer commercial fisheries within the Columbia River, takes into account the impacts from other state and tribal fisheries (e.g., recreational, ceremonial, subsistence, etc.) authorized under the Columbia River Fish Management Plan. The majority of ocean chinook harvest north of Cape Falcon is provided by Columbia River salmon stocks, primarily hatchery production of tule fall chinook from the Bonneville Pool (Spring Creek) and lower river hatcheries, smaller numbers of upper river bright hatchery and natural fall chinook, and some lower river hatchery spring chinook (Cowlitz). Hatchery objectives are based on long-range production programs and/or mitigation requirements associated with displaced natural stocks. Threatened Snake River fall chinook, which suffer from severe dam passage mortalities and extreme loss of freshwater habitat, are of prime concern in limiting ocean exploitation rates in all ocean fisheries north of Pigeon Pt., California. These limits act to provide considerable protection to other weak natural stocks subject to ocean fishery impacts.		
North Lewis River Fall Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). McIsaac (1990) stock-recruit analysis supports MSY objective of 5,700 natural adult spawners.	No. Listed stock. ESA jeopardy standard provides interim rebuilding program. Base period Council-area ocean fishery impacts around 7%.	Medium to low abundance. Present in ocean fisheries north of Cape Falcon to SE Alaska.
Lower River Hatchery Fall	15,400 adults to meet egg-take goal or as determined by management entities.	No (hatchery exception).	Medium to low abundance. Major contributor to ocean fisheries north of Cape Falcon to central British Columbia.
Lower River Hatchery (Spring)	2,700 adults to meet Cowlitz, Kalama, and Lewis Rivers broodstock needs.	No (hatchery exception).	Medium to low abundance. Present in ocean fisheries north of Cape Falcon to SE Alaska.
Upper Willamette (Spring) Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). Willamette River Management Plan provides an MSY proxy of 30,000 to 45,000 hatchery and natural adults over Willamette River falls, depending on run size.	No. Listed stock. ESA jeopardy standard provides interim rebuilding program. Base period Council-area ocean fishery exploitation rate of <1% prevents effective Council fishery management and rebuilding.	Low abundance. Present in fisheries north of Cape Falcon to SE Alaska.
Mid-River Bright Hatchery (Fall)	None for ocean fishery management.	No (hatchery exception).	Medium to high abundance. Contributor to ocean fisheries off Washington, British Columbia, and southeast Alaska. Primarily produced at Bonneville Hatchery.
Spring Creek Hatchery (Fall)	7,000 adults to meet hatchery egg-take goal.	No (hatchery exception).	Low abundance. Significant contributor to ocean fisheries north of Cape Falcon to southern British Columbia.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 5 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		- - - CHINOOK - - -	
COLUMBIA RIVER BASIN (continued)			
Klickitat, Warm Springs, John Day, and Yakima Rivers (Spring)	Hold ocean fishery impacts at or below base period (<1%) and recognize CRFMP objective - MSY proxy of 115,000 adults above Bonneville Dam, including upper and mid-Columbia and Snake River stocks (state and tribal management entities considering separate conservation objectives for these stocks).	Limited. Base period Council-area ocean fishery exploitation rate of <1% prevents effective Council fishery management and rebuilding. Major habitat restoration addressing water withdrawals and dam passage and blockages is necessary for rebuilding.	Long-term depressed abundance. No significance to ocean fisheries, infrequent occurrence in fisheries north of Cape Falcon to Alaska.
Snake River Fall Threatened (1992)	NMFS jeopardy/recovery standard. Since 1995, Council has met a standard of limiting its fisheries so that the total exploitation rate on age-3 and age-4 Lyons Ferry Hatchery fall chinook (representing Snake River fall chinook) for all ocean fisheries (including Canada) has been ≤70% of the 1988-1993 average adult equivalent exploitation rate. Prior to listing, managed within objectives for upper Columbia River bright fall chinook.	No. Listed stock, MSY criteria undefined. ESA jeopardy standard provides interim rebuilding program. Recovering historic abundance unlikely as dams block former primary spawning area.	Present in ocean fisheries from central California to southeast Alaska with greatest contribution to Canadian fisheries. Primary impacts in Council fisheries north of Cape Falcon, but also extending to Pigeon Pt., CA.
Snake River Spring/Summer Threatened (1992)	Not applicable for ocean fisheries.	No. Listed stock. Base period Council-area ocean fishery impacts rare (unmeasurable). Dam passage mortality must be reduced to allow stock recovery.	Depressed, recent trend downward. Rare occurrence in ocean fisheries from Washington to SE Alaska.
Upper River Bright (Fall)	40,000 natural bright adults above McNary Dam (MSY proxy adopted in 1984 based on CRFMP. The management goal has been increased to 45,000 by Columbia River managers in recent years.	Limited. Base period Council-area ocean fishery exploitation rate <4% prevents effective Council fishery management and rebuilding.	High to medium abundance. Significant contributor to ocean fisheries off Canada and to a lesser extent Washington and Oregon. Primary impact area north of Cape Falcon.
Upper River Summer	Hold ocean fishery impacts at or below base period (<2%); recognize CRFMP objective - MSY proxy of 80,000 to 90,000 adults above Bonneville Dam, including both Columbia and Snake River stocks (state and tribal management entities considering separate objectives for these stocks).	Limited. Base period Council-area ocean fishery exploitation rate <2% prevents effective Council fishery management and rebuilding. Dam passage mortalities must be reduced to allow rebuilding.	Long-term depressed abundance. Present in ocean fisheries north of Cape Falcon to southeast Alaska.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 6 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		- - - CHINOOK - - -	
COLUMBIA RIVER BASIN (continued)			
Upper River Spring Endangered (1999)	None applicable to ocean fisheries. Ensure ocean fishery impacts remain rare and recognize CRFMP objective - MSY proxy of 115,000 adults above Bonneville Dam, including upper and mid-Columbia and Snake River stocks (state/tribal management entities considering separate objectives for these stocks).	No. Listed stock. Base period Council-area ocean fishery impacts rare (not measurable), making Council management and rebuilding ineffective. Reduce dam passage mortalities to allow rebuilding.	Long-term depressed abundance. Captive broodstock programs started in 1997. No significance to ocean fisheries. Rare occurrence in ocean fisheries north of Cape Falcon to Canada.
WASHINGTON COAST - All pertinent fall, summer and spring stocks from coastal streams north of the Columbia River through the western Strait of Juan de Fuca (west of the Elwha River). This stock complex consists of several natural stocks, generally of small to medium sized populations, and some hatchery production (Willapa Bay and the Quinault River). Stocks in this complex tend to range further north than most Columbia River stocks and, while present in fisheries from Cape Falcon to SE Alaska, are not significantly impacted by Council-area ocean fisheries. Preseason abundance estimates are generally not available for Council management. These stocks qualify as **exceptions** to the Council's overfishing criteria due to very low fishery impacts. Spawning escapement goals for stocks managed within this complex, established in U.S. District Court by WDFW and the treaty tribes, are recognized in the Council's conservation objectives below. Objectives for Grays Harbor and the north coast river systems have been established pursuant to the U.S. District Court order in Hoh v. Baldrige. However, annual natural spawning escapement targets may vary from the conservation objectives below if agreed to by WDFW and the treaty tribes under the provisions of Hoh v. Baldrige and subsequent U.S. District Court orders. After agreement is reached on the annual targets, ocean fishery escapement objectives are established for each river, or region of origin, which include provisions for treaty allocation and inside, non-Indian fishery needs.			
Willapa Bay Fall (natural)	Undetermined.	Limited (exploitation rate exception).	
Willapa Bay Fall (hatchery)	8,200 adult return to hatchery.	No (hatchery exception).	
Grays Harbor Fall	14,600 natural adult spawners--MSP based on full seeding of spawning and rearing habitat (WDF 1979).	Limited (exploitation rate exception).	
Grays Harbor Spring	1,400 natural adult spawners.	"	
Quinault Fall	Hatchery production.	No (hatchery exception).	
Queets Fall	Manage terminal fisheries for 40% harvest rate, but no less than 2,500 natural adult spawners, the MSY level estimated by Cooney (1984).	Limited (exploitation rate exception).	
Queets Spring/Summer	Manage terminal fisheries for 30% harvest rate, but no less than 700 natural adult spawners.	"	

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 7 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		- - - CHINOOK - - -	
WASHINGTON COAST (continued)			
Hoh Fall	Manage terminal fisheries for 40% harvest rate, but no less than 1,200 natural adult spawners, the MSY level estimated by Cooney (1984).	"	
Hoh Spring/Summer	Manage terminal fisheries for 31% harvest rate, but no less than 900 natural adult spawners.	"	
Quillayute Fall	Manage terminal fisheries for 40% harvest rate, but no less than 3,000 natural adult spawners, the MSY level estimated by Cooney (1984).	"	
Quillayute Spring/Summer	1,200 natural adult spawners for summer component (MSY).	"	
Hoko Summer/Fall (Western Strait of Juan de Fuca)	850 natural adult spawners, the MSP level estimated by Ames and Phinney (1977). May include adults used for supplementation program.	"	
PUGET SOUND - All fall, summer, and spring stocks originating from U.S. tributaries to Puget Sound and the eastern Strait of Juan de Fuca (east of Salt Creek). This stock complex consists of numerous natural chinook stocks of small to medium sized populations and significant hatchery production. Puget Sound stocks contribute to fisheries off British Columbia and are present into SE Alaska, but are impacted to a minor degree by Council-area ocean fisheries. Base period, Council-area ocean fishery exploitation rates (adult equivalent) of 2% or less are below a management threshold which allows effective Council management of these stocks and they qualify as **exceptions** to the Council's overfishing criteria. The stocks within this complex and their respective conservation objectives, established in U.S. District Court by WDFW and the Treaty tribes, are recognized below. The conservation objectives for stocks managed primarily for natural production were developed by a State/Tribal Management Plan Development Team following the Boldt Decision and were based on "the adult spawning population that will, on the average, maximize biomass of juvenile outmigrants subsequent to incubation and freshwater rearing under average environmental conditions." The objectives were estimated for the average spawning escapements during periods that were thought to represent spawner abundances that provided maximum production (Ames and Phinney 1977). The objectives for stocks managed for artificial production are based on hatchery escapement needs. Annual management targets (expected hatchery plus natural escapement) for specific rivers or regions of origin may vary from the conservation objectives by following fixed procedures established in U.S. District Court as outlined in "Memorandum Adopting Salmon Management Plan" (U.S. v. Washington, 626 F. Supp. 1405 [1985]).			
Eastern Strait of Juan de Fuca Summer/Fall Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 3,825 natural and hatchery adult spawners--2,900 for the Elwha River (Ames and Phinney 1977) and 925 for the Dungeness River (Smith and Sele 1994).	Limited (exploitation rate exception).	

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 8 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		--- CHINOOK ---	
PUGET SOUND (continued)			
Skokomish Summer/Fall (Hood Canal) Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 1,650 natural adult spawners (Ames and Phinney 1977).	"	
Nooksack Spring (early) Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 2,000 natural adult spawners.	"	
Skagit Summer/Fall Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 14,850 natural adult spawners (Ames and Phinney 1977).	"	
Skagit Spring Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 3,000 natural adult spawners based on mean escapement 1959-1968.	"	
Stillaguamish Summer/Fall Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 2,000 natural adult spawners (Ames and Phinney 1977).	"	
Snohomish Summer/Fall Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 5,250 natural adult spawners (Ames and Phinney 1977).	"	
Cedar River Summer/Fall (Lake Washington) Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 1,200 natural adult spawners (Hage *et al.* 1994).	"	
White River Spring Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 1,000 natural adult spawners.	"	
Green River Summer/Fall Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 5,750 natural adult spawners (Ames and Phinney 1977).	"	
Nisqually River Summer/Fall (South Puget Sound) Threatened (1999)	NMFS jeopardy standard/recovery plan (not established at time of printing). MSP objective of 900 natural adult spawners.	"	

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 9 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
	- - - CHINOOK - - -		
SOUTHERN BRITISH COLUMBIA - Fall and spring stocks of British Columbia coastal streams and the Fraser River. Management based primarily on natural and hatchery fall chinook. Base period, Council-area ocean fishery exploitation rates (adult equivalent) on the coastal stocks of 1% or less are below a management threshold which allows effective Council management of these stocks and they qualify as **exceptions** to the Council's overfishing criteria.			
Coastal Stocks	Undefined for Council fisheries. Manage consistent with the Pacific Salmon Treaty.	No. Under Canadian authority and would also be an exploitation rate exception.	Medium abundance. Major contributors to ocean fisheries off British Columbia; significant contributors north into SE Alaska and present off northern Washington.
Fraser River	Undefined for Council fisheries. Manage consistent with the Pacific Salmon Treaty.	No. Under Canadian authority.	Medium abundance. Major contributors to ocean fisheries off British Columbia; contributors off northern Washington; and present north into SE Alaska.
	- - - COHO - - -		
OREGON PRODUCTION INDEX AREA - All Washington, Oregon, and California natural and hatchery coho stocks from streams south of Leadbetter Pt. Significant production from Columbia River and Oregon coastal hatcheries provide harvest in ocean fisheries throughout the Council management area. Ocean fisheries are usually limited primarily to meet natural escapement objectives. Treaty Indian obligations, nontreaty harvest opportunity, and hatchery requirements must also be factored in for the Columbia River stocks. Both natural and hatchery components have been severely depressed for several yeas due to a combination of previously high fishery impacts, major losses or degradation of freshwater habitat, and long-term marine conditions unfavorable to coho survival.			
Central California Coast Threatened (1996)	NMFS jeopardy standard/recovery plan. Since 1998, no retention of coho in commercial and recreational fisheries off California in conjunction with total marine fishery impacts of no more than 13% on Rogue/Klamath hatchery coho (surrogate stock). Objective undefined prior to listing.	No. Listed stock, MSY criteria undefined. ESA jeopardy standard provides interim protection of productive capacity. Recovery limited by deterioration of significant portions of freshwater habitat, distribution at southern edge of coho range, and ongoing unfavorable marine conditions.	Very minor component of OPI area fisheries, limited potential for significant contribution to ocean and inland fisheries. Current impacts incidental in ocean fisheries off California. Development of monitoring and assessment program considered for Ten Mile River, Noyo River, Gualala River, Lagunitas Creek, and Scott Creek. Rogue/Klamath coho are believed to have a similar, but more northerly distribution.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 10 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		--- COHO ---	
OREGON PRODUCTION INDEX (continued)			
Northern California Threatened (1997)	NMFS jeopardy standard/recovery plan. Since 1998, total marine fishery impacts limited to no more than 13% on Rogue/Klamath hatchery coho (surrogate stock) and no retention of coho in California ocean fisheries. Objective undefined prior to listing.	No. Listed stock, MSY criteria undefined. ESA jeopardy standard provides interim protection of productive capacity. Recovery may last more than 10 years even with no fishery impacts due to loss or deterioration of significant portions of freshwater habitat and ongoing unfavorable marine conditions.	Depressed and listed. Very minor natural component of OPI area fisheries, potential for minor contribution to ocean fisheries off California and southern Oregon, and inland California fisheries. Current impacts incidental in ocean and inland fisheries (total non-retention south of Cape Falcon since 1994). CDFG considering monitoring to provide data for the Smith, Trinity, Eel, Mattole, and Klamath Rivers.
Oregon Coastal Natural Comprised of Southern, South-Central, North-Central, and Northern Oregon stocks. Threatened (1997 and 1998)	NMFS jeopardy standard/recovery plan consistent with Council's objective under Amendment 13 and the Oregon Plan: For each of the 4 component stocks, a rebuilding and data collection program with an allowable marine and freshwater exploitation rate of no more than 13% to 35%, depending on parent escapement and ocean survival trends (adopted 1997). For a detailed description of the objective, see Section 3.3.2. Prior PFMC objectives contained in PFMC (1984 and 1993).	No. Listed stock, rebuilding program initiated in 1998. The annual conservation objective should allow component stocks to rebuild when environmental conditions are favorable. Recovery for some components may last more than 10 years even with no fishery impacts due to loss or deterioration of significant portions of freshwater habitat and ongoing unfavorable marine conditions.	Depressed and listed. Major natural component of OPI area which, when abundant, contributes to ocean fisheries off California, Oregon, and Washington south of Leadbetter Pt., and freshwater fisheries in Oregon coastal streams. Current impacts primarily incidental in ocean fisheries under a total nonretention regulation south of Cape Falcon since 1994.
Columbia River Late (Hatchery)	Hatchery rack return goal of 17,200 adults.	No (hatchery exception).	Major component of ocean fisheries north of Cape Falcon. When abundant, significant contributors to ocean fisheries off Oregon north into Canada and Columbia River fisheries.
Columbia River Early (Hatchery)	Hatchery rack return goal of 18,800 adults.	No (hatchery exception).	Major component of OPI area fisheries. When abundant, significant contributors to ocean fisheries off California and north to Leadbetter Pt., WA and to Columbia River fisheries. Current ocean fishery impacts from very limited retention fisheries north of Cape Falcon and incidental hook-and-release mortality in fisheries south of Cape Falcon.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 11 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		--- COHO ---	
OREGON PRODUCTION INDEX (continued)			
Columbia River (Natural)	Undefined. Management is in a transitional phase pending completion of a critical review that may establish an explicit objective.	Not presently. See management information.	Extinct above the Dalles Dam, very rare below. Lower river coho are a candidate species under the ESA with an ongoing effort to determine if a reproducing population can be found and rebuilt.
WASHINGTON COASTAL - All pertinent natural and hatchery stocks originating in Washington coastal streams north of the Columbia River through the western Strait of Juan de Fuca (West of the Elwha River). Management goals for Grays Harbor and Olympic Peninsula coho stocks include achieving natural spawning escapement objectives and treaty allocation requirements, although Grays Harbor also contains a significant amount of hatchery production. The conservation objectives for these stocks are based on MSY spawner escapements established pursuant to the U.S. District Court order in Hoh v. Baldrige. Annual natural spawning escapement targets and total escapement objectives are established by the Washington Department of Fish and Wildlife and treaty tribes under the provisions of U.S. v. Washington and subsequent U.S. District Court orders. After agreement to annual targets is reached by the parties in this litigation, ocean fishery escapement objectives are established for each river, or region of origin, which include provisions for providing treaty allocation requirements and inside, non-Indian fishery needs. The conservation objectives for the Queets, Hoh and Quillayute Rivers were developed as ranges intended to bracket the current best estimates of MSY escapement. The range of each objective reflects the degree of uncertainty inherent by using the high estimate of recruits-per-spawner and low estimate of carrying capacity for the lower bound, and the low estimate of recruits-per-spawner with the high estimate of smolt carrying capacity for the upper end of the range. The ranges were subsequently adjusted upward for risk aversion and again for habitat considerations by 26% to 184% (Lestelle et al. 1984).			
Willapa Bay (Hatchery)	Meet WDFW program objectives.	No (hatchery exception).	Minor component of ocean fisheries off northern Oregon north into Canada. Significant contributor to inside commercial net and recreational fisheries. WDFW critically reviewing current management to determine if objectives for natural stocks are warranted.
Grays Harbor	35,400 natural adult spawners (MSP based on WDF [1979]) or annual target agreed to by WDFW and the Quinault Indian Nation .	Yes. Conservation alert or overfishing concern based on fewer than 35,400 natural spawners.	Medium to high abundance. Minor contributor to ocean fisheries off Oregon and north into Canada. Significant contributor to Washington inside tribal fishery, minor contributor to inside recreational fishery.
Quinault (Hatchery)	Meet hatchery program objectives and provide escapement to utilize production potential for naturally spawning fish.	No (hatchery exception).	Contributor to ocean fisheries off Washington and north into British Columbia; present south to central Oregon; significance to Puget Sound and tribal fisheries.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 12 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		- - - COHO - - -	
WASHINGTON COAST (continued)			
Queets	MSY range of 5,800 to 14,500 natural adult spawners (Lestelle *et al.* 1984) or annual target agreed to by WDFW and the Quinault Indian Nation.	Yes. Conservation alert or overfishing concern based on fewer than 5,800 natural spawners.	Small population. Low to depressed abundance. Contributor to ocean fisheries off Washington north into British Columbia; present south to central Oregon; significance to Puget Sound and tribal fisheries.
Hoh	MSY range of 2,000 to 5,000 natural adult spawners (Lestelle *et al.* 1984) or annual target agreed to by WDFW and Hoh Tribe.	Yes. Conservation alert or overfishing concern based on fewer than 2,000 natural spawners.	Small population. Medium to low abundance. Contributor to ocean fisheries off Washington north into British Columbia; present south to central Oregon.
Quillayute Fall	MSY range of 6,300 to 15,800 natural adult spawners (Lestelle *et al.* 1984) or annual target agreed to by WDFW and the Quillayute Tribe.	Yes. Conservation alert or overfishing concern based on fewer than 6,300 natural spawners.	Small population. Depressed abundance. Contributor to ocean fisheries off Washington north into British Columbia; present south to central Oregon.
Quillayute Summer (Hatchery)	Meet hatchery program objectives.	No (hatchery exception).	Low to depressed abundance. Early river entry timing. Contributor to ocean fisheries off Washington north into British Columbia; present south to central Oregon.
Western Strait of Juan de Fuca (Sekiu, Hoko, Clallam, Pysht, East and West, and Lyre Rivers and Miscellaneous streams west of the Elwha River)	MSP objective of 9,400 natural adult spawners (Clark 1983 modified by habitat apportionment of WDFW/Tribal Technical Committee in 1998) or annual target agreed to through fixed procedures established in U.S. District Court.	Yes. Conservation alert or overfishing concern based on fewer than 9,720 natural spawners.	Small population. Low to depressed abundance. Little information on ocean distribution. A new annual objective of stepped exploitation rates is under consideration by WDFW and the tribes.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 13 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		--- COHO ---	
PUGET SOUND - All pertinent natural and hatchery stocks originating from U.S. tributaries to Puget Sound and the eastern Strait of Juan de Fuca (east of Salt Creek). The Puget Sound Salmon Management Plan defines management objectives and long term goals for these stocks as developed by representatives from federal, state and tribal agencies. Conservation objectives for specific stocks are currently based on either MSP principles for stocks managed primarily for natural production or upon hatchery escapement needs for stocks managed for artificial production. However, a transition to exploitation rate management is currently under consideration by the involved managers. Annual escapement targets for these coho stocks are developed through procedures established in U.S. District Court. Puget Sound management procedures are outlined in a "Memorandum Adopting Salmon Management Plan" (U.S. v. Washington, 626 F. Supp. 1405 [1985]). The original conservation objectives were developed by a State/Tribal Management Plan Development Team following the Boldt Decision with the goal for natural spawning stocks defined as "the adult spawning population that will, on the average, maximize biomass of juvenile outmigrants subsequent to incubation and freshwater rearing under average environmental conditions." The methodology used to develop the objectives was based on assessment of the quantity and quality of rearing habitat and the number of adult spawners required to fully seed the habitat (Zillges 1977). Some objectives have subsequently been modified in 1983 by the U.S. District Court Fisheries Advisory Board (Clark 1983 and PSSSRG 1997) and later determinations of the WDFW/Tribal Technical Committee.			
Eastern Strait of Juan de Fuca (Streams east of Salt Creek through Chimacum Creek))	MSP objective of 3,450 natural adult spawners (Clark 1983 modified by habitat apportionment of WDFW/Tribal Technical Committee in 1998) or annual target agreed to in fixed procedures set by U.S. District Court. The Elwha and Dungeness Rivers are not included in this objective, but are managed on a harvest rate basis.	Yes. Conservation alert or overfishing concern based on fewer than 3,130 natural spawners.	Small population. Low to depressed abundance. Little information on ocean distribution. A new annual objective of stepped exploitation rates is under consideration by WDFW and the tribes.
Hood Canal	MSP objective of 21,500 natural adult spawners (Clark 1983 modified since 1994 by WDFW/Tribal Technical Committee) or annual target agreed to in fixed procedures set by U.S. District Court.	Yes. Conservation alert or overfishing concern based on fewer than 21,500 natural spawners.	Low to medium abundance. Contributor to U.S. ocean fisheries north of Cape Falcon; significant contributor to ocean fisheries off British Columbia, in Puget Sound, and inside tribal fisheries. A new objective utilizing stepped exploitation rates is under consideration by WDFW and the tribes which may utilize harvest rate management rather than a fixed spawner goal.
Skagit	MSP objective of 30,000 natural adult spawners (Zillges 1977 and Clark 1983) or annual target agreed to in fixed procedures set by U.S. District Court. (The spawner assessment methodology is currently being revised and may result in an objective significantly different from 30,000.)	Yes. Conservation alert or overfishing concern based on fewer than 30,000 natural spawners.	Low to depressed abundance. Contributor to U.S. ocean fisheries north of Cape Falcon; significant contributor to ocean fisheries off British Columbia, in Puget Sound, and inside tribal fisheries. A new objective is under consideration by WDFW and the tribes which may utilize harvest rate management rather than a fixed spawner goal.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 14 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
		--- COHO ---	
PUGET SOUND (continued)			
Stillaguamish	MSP objective of 17,000 natural adult spawners (Zillges 1977) or annual target agreed to in fixed procedures set by U.S. District Court.	Yes. Conservation alert or overfishing concern based on fewer than 17,000 natural spawners.	Medium to low abundance. Contributor to U.S. ocean fisheries north of Cape Falcon; significant contributor to ocean fisheries off British Columbia, in Puget Sound, and inside tribal fisheries. A new objective is under consideration by WDFW and the tribes which may utilize harvest rate management rather than a fixed spawner goal..
Snohomish	MSP objective of 70,000 natural adult spawners (Zillges 1977 as modified by WDFW/Tribal Technical Committee) or annual target agreed to in fixed procedures set by U.S. District Court.	Yes. Conservation alert or overfishing concern based on fewer than 70,000 natural spawners.	High to medium abundance. Contributor to U.S. ocean fisheries north of Cape Falcon; significant contributor to ocean fisheries off British Columbia, in Puget Sound, and inside tribal fisheries. A new annual objective is under consideration by WDFW and the tribes which may utilize harvest rate management rather than a fixed spawner goal..
South Puget Sound (Hatchery)	Hatchery rack return goal of 52,000 adults. Natural production goals under development.	No (hatchery exception).	High abundance. Contributor to U.S. ocean fisheries north of Cape Falcon; significant contributor off British Columbia, in Puget Sound, and inside tribal fisheries.
SOUTHERN BRITISH COLUMBIA COAST - Stocks of southern British Columbia coastal streams (including Vancouver Island) and the Fraser River.			
Coastal Stocks	Manage Council fisheries that impact Canadian stocks consistent with provisions of the Pacific Salmon Treaty.	No. Not under Council management authority.	Medium to low abundance. Major contributors to ocean fisheries off British Columbia; significant contributors north into SE Alaska and present off northern Washington.
Fraser River	Manage Council fisheries that impact Canadian stocks consistent with provisions of the Pacific Salmon Treaty.	No. Not under Council management authority.	Medium to low abundance. Major contributors to ocean fisheries off British Columbia.

TABLE 3-1. Conservation objectives and management information for natural and hatchery salmon stocks and stock complexes of significance to ocean salmon fisheries. Abundance information is generally based on the period 1994-1998.[a/] (Page 15 of 15)

Stock	Conservation Objective (to be met annually unless noted otherwise)	Subject to Council Actions to Prevent Overfishing	Other Management Information
	- - - PINK (odd-numbered years) - - -		
The Fraser River Panel of the Pacific Salmon Commission (PSC) manages fisheries for pink salmon in the Fraser River Panel Area (U.S.) north of 48° N latitude to meet Fraser River natural spawning escapement and U.S./Canada allocation requirements. The Council manages pink salmon harvests in that portion of the EEZ which is not in the Fraser River Panel Area (U.S.) waters consistent with Fraser River Panel management intent. Pink salmon management objectives must address meeting natural spawning escapement objectives, allowing ocean pink harvest within fixed constraints of coho and chinook harvest ceilings and providing for treaty allocation requirements.			
Puget Sound	900,000 natural spawners or consistent with provisions of the Pacific Salmon Treaty (Fraser River Panel)	No. Minor impacts in Council fisheries and not under Council management authority.	High abundance. Contributors to ocean fisheries off British Columbia and in Puget Sound. Present south into Oregon. Rare off California.
Fraser River	Manage Council fisheries that impact Canadian stocks consistent with provisions of the Pacific Salmon Treaty (Fraser River Panel)	No. Minor impacts in Council fisheies and not under Council management authority.	High to medium abundance. Major contributors to ocean fisheries off British Columbia; present into SE Alaska and off Washington and northern Oregon. Rare off California.

a/ This table may be updated periodically by formal amendments to the FMP or comprehensive technical reviews which result in modified conservation objectives or the development of rebuilding programs in response to overfishing concerns. In addition, any stock listed under the ESA and its jeopardy standard or recovery plan will immediately be incorporated in the table.

TABLE 3-2. Listing of evolutionarily significant units, their ESA status and associated stocks managed under the FMP. (Page 1 of 2).

ESU[a/]	ESA Status Month and Year of Initial Listing	Stock Representation in FMP
	- - - CHINOOK - - -	
Central Valley Fall	Candidate Species Sept. 1999	• Sacramento River Fall
Central Valley Spring	Listed Threatened Sept. 1999	• Central Valley Spring
Sacramento River Winter	Listed Endangered Aug. 1989	• Sacramento River Winter
California Coast	Listed Threatened Sept. 1999	• Eel, Mattole, and Mad Rivers
Southern Oregon/Northern California Coast	Not Warranted Sept. 1999	• Southern Oregon • Smith River • Klamath River Fall
Upper Klamath and Trinity Rivers	Not Warranted	• Klamath River Fall • Klamath River Spring
Oregon Coast	Not Warranted	• Central and Northern Oregon
Washington Coast	Not Warranted	• Willapa Bay Fall • Grays Harbor Fall • Grays Harbor Spring • Queets Fall • Queets Spring/Summer • Hoh Fall • Hoh Spring/Summer • Quillayute Fall • Quilayute Spring/Summer • Hoko Summer/Fall (Western Strait of Juan de Fuca)
Puget Sound	Listed Threatened May 1999	• Elwha Summer/Fall (Eastern Strait of Juan de Fuca) • Skokomish Summer/Fall (Hood Canal) • Nooksack Spring (early) • Skagit Summer/Fall • Skagit Spring • Stillaguamish Summer/Fall • Snohomish Summer/Fall • Cedar River Summer/Fall (Lake Washington) • White River Spring • Green River Summer/Fall • Nisqually River Summer/Fall (South Puget Sound)
Lower Columbia River	Listed Threatened May 1999	• Sandy, Kalama, and Cowlitz (fall and spring) • North Lewis River Fall
Upper Willamette River	Listed Threatened May 1999	• Upper Willamette and Sandy Rivers
Mid-Columbia River Spring	Not Warranted	• Klickitat, Warm Springs, John Day and Yakima Rivers (spring)
Upper-Columbia River Summer/Fall	Not Warranted	• Upper River Bright • Upper River Summer
Upper Columbia River Spring	Listed Endangered May 1999	• Upper Columbia River Spring
Snake River Fall	Listed Threatened May 1992	• Snake River Fall
Snake River Spring/Summer	Listed Threatened May 1992	• Snake River Spring/Summer

TABLE 3-2. Listing of evolutionarily significant units, their ESA status and associated stocks managed under the FMP. (Page 2 of 2).

ESU[a/]	ESA Status Month and Year of Initial Listing	Stock Representation in FMP
--- COHO ---		
Central California Coast	Listed Threatened Dec. 1996	• By proxy - Rogue/Klamath hatchery coho
Southern Oregon/Northern California Coasts	Listed Threatened May 1997	• Southern Oregon Coastal Natural • Northern California
Oregon Coast	Listed Threatened Oct. 1998	• South Central Oregon Coast • North Central Oregon Coast • Northern Oregon Coastal
Lower Columbia River/South Western Washington Coast	Candidate Species July 1995	• Grays Harbor
Olympic Peninsula	Not Warranted	• Queets • Hoh • Quillayute Fall • Strait of Juan de Fuca (Western)
Puget Sound/Strait of Georgia	Candidate Species	• Strait of Juan de Fuca (Eastern) • Hood Canal • Skagit • Stillaguamish • Snohomish
--- PINK ---		
Puget Sound, Odd Numbered Years	Not Warranted	• Puget Sound

a/ A description of the ESU boundaries may be found at 63 FR 11486 (March 9, 1998) for chinook and 60 FR 38016 (July 25, 1995) for coho.

3.3.2 Oregon Coastal Natural Coho

Amendment 13 (PFMC 1999) established a recovery and rebuilding plan for Oregon coastal natural (OCN) coho which (1) defines individual management criteria for four separate stock components, (2) sets overall harvest exploitation rate targets for OCN coho that significantly limit the impact of fisheries on the recovery of depressed stock components, (3) promotes stock rebuilding while allowing limited harvest of other abundant salmon stocks during critical rebuilding periods, and (4) is consistent with the Oregon State recovery plan. Under the rebuilding program, the overall allowable fishery impact rate in any given year for each stock component is determined by the spawning abundance of the parents and grandparents of the returning adults and upon the marine survival expectations for the current maturing brood, as predicted by smolt-to-jack survival rates for hatchery coho.

The assessment of historic parent abundance utilized in Amendment 13 is based on the number of spawners in each of the four stock components that is projected to achieve full seeding of high quality freshwater habitat at low levels of marine survival. The full seeding estimates (in terms of stratified random sampling numbers) are derived from a model based on freshwater habitat assessment which incorporates measures of variability in the quality of the freshwater habitat and estimates of survival between life stages where numerical indicators have been measured (Nickelson and Lawson 1996). The assessment of marine survival status is based on a partitioning of the observed marine survival for Oregon hatchery reared coho from 1970-1996 (see Amendment 13 for further details).

Under the rebuilding plan, the allowable overall fishery impact (exploitation rate) for OCN coho represents all fishing related mortality, including marine and freshwater fisheries for both retention and catch-and-release fishing. The maximum allowable exploitation rates range from less than 10% when parent

abundance and/or marine survival is especially low, to a high of 35% if two generations of spawner rebuilding have occurred and marine survival is sufficient to expect continued improvements in spawner escapement for a third generation. Regardless of high parental spawning levels or projected favorable ocean conditions, a cap of 35% in total stock impacts is maintained to provide insight as to the effects of high spawner levels on production. A limitation of 15% remains in effect even at the two highest tiers of parent escapement if ocean conditions are not favorable, so as to preserve rebuilding progress achieved to that point. The matrix in Table 3-3 illustrates specifically how spawner abundance and marine survival determine the maximum allowable stock exploitation rate objectives for each OCN coho stock component.

Each of the four OCN coho stock components will be managed in marine fisheries as a separate stock to the extent that the best scientific information allows. Because of apparent similarities in the marine distribution of the four components, little flexibility is expected in marine fishery intensities among the components. If some components begin rebuilding faster than others, but data are not available which allows the marine harvest of OCN coho components at different rates, opportunities for increased ocean harvest may be constrained by the weakest component. Any management flexibility for increased fisheries on any strong OCN coho component will be essentially in freshwater or estuarine areas during the initial phase of the rebuilding process. In these areas, ODFW will base fishing opportunity on the status of populations in individual basins within a stock component and directed fisheries on natural coho will be allowed only when spawners are expected to be at or above the full seeding level for high quality habitat. Actual seasons would be based on the presence of fin-clipped hatchery fish (e.g., selective fisheries), public comment, and other basin-specific factors. An intensive monitoring program will be implemented by ODFW to measure the overall management effectiveness toward the goal of increasing OCN spawner levels and consequent juvenile and adult progeny. Amendment 13 (PFMC 1999) contains further details of the monitoring plan and of the overall OCN coho management criteria and its basis.

In consideration for the uncertainties that exist in this recovery regime and the potential for new information to affect basic assumptions critical to its success, **the measures adopted in Amendment 13 are subject to a comprehensive, adaptive review by the year 2000.** To incorporate the best science, the methods of estimating the technical parameters used in this proposal may change without plan amendment, if approved by the Council following a technical review and recommendation for change by the Scientific and Statistical Committee.

3.4 BYCATCH

> *"Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch."*
> *Magnuson-Stevens Act, National Standard 9*

> *"establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority–*
> *(A) minimize bycatch; and*
> *(B) minimize the mortality of bycatch which cannot be avoided;"*
> *Magnuson-Stevens Act , § 303(a)(11)*

3.4.1 Definition and Management Intent

"Bycatch" for the purposes of this fishery management plan is defined as: fish caught in an ocean salmon fishery which are not sold or kept for personal use and includes economic discards, regulatory discards, and fishery mortality due to an encounter with fishery gear that does not result in capture of fish. Bycatch does not include any fish that legally are retained in a fishery and kept for personal, tribal, or cultural use, or that enter commerce through sale, barter, or trade. In addition, under the provisions of the Magnuson-Stevens Act, bycatch does not include targeted salmon released alive under a recreational catch-and-release fishery management program.

TABLE 3-3. Allowable fishery impact rate criteria for OCN coho stock components.

PARENT SPAWNER STATUS		MARINE SURVIVAL INDEX (based on return of jacks per hatchery smolt) Low (<0.0009)	Medium (0.0009 to 0.0034)	High (>0.0034)
		Allowable Total Fishery Impact Rate		
High:	Parent spawners achieved Level #2 rebuilding criteria; grandparent spawners achieved Level #1	≤15%	≤30%[a/]	≤35%[a/]
Medium:	Parent spawners achieved Level #1 or greater rebuilding criteria	≤15%	≤20%[a/]	≤25%[a/]
Low:	Parent spawners less than Level #1 rebuilding criteria	≤15% ≤10-13%[b/]	≤15%	≤15%

Rebuilding Criteria	OCN Coho Spawners by Stock Component Northern	North-Central	South-Central	Southern	Total
Full Seeding at Low Marine Survival:	21,700	55,000	50,000	5,400	132,100
Level #2 (75% of full seeding):	16,400	41,300	37,500	4,100	99,300
Level #1 (50% of full seeding):	10,900	27,500	25,000	2,700	66,100
38% of Level #1 (19% of full seeding):	4,100	10,500	9,500	1,000	25,100

Stock Component (Boundaries)	Full Seeding of Major Basins at Low Marine Survival (Number of Adult Spawners)				
Northern: (Necanicum River to Neskowin Creek)	Nehalem	Tillamook	Nestucca	Ocean Tribs.	
	17,500	2,000	1,800	400	
North-Central: (Salmon River to Siuslaw River)	Siletz	Yaquina	Alsea	Siuslaw	Ocean Tribs.
	4,300	7,100	15,100	22,800	5,700
South-Central: (Siltcoos River to Sixes River)	Umpqua	Coos	Coquille	Coastal Lakes	
	29,400	7,200	5,400	8,000	
Southern: (Elk River to Winchuck River)	Rogue				
	5,400				

a/ When a stock component achieves a medium or high parent spawner status under a medium or high marine survival index, but a major basin within the stock component is less than 10% of full seeding: (1) the parent spawner status will be downgraded one level to establish the allowable fishery impact rate for that component and (2) no coho-directed harvest impacts will be allowed within that particular basin.

b/ This exploitation rate criteria applies when (1) parent spawners are less than 38% of the Level #1 rebuilding criteria, or (2) marine survival conditions are projected to be at an extreme low as in 1994-1996 (<0.0006 jack per hatchery smolt). If parent spawners decline to lower levels than observed through 1998, rates of less than 10% would be considered, recognizing that there is a limit to further bycatch reduction opportunities.

Under the salmon FMP, the primary bycatch that occurs is bycatch of salmon species. Therefore, the Council's conservation and management measures shall seek to minimize salmon bycatch and bycatch mortality (drop off and hooking mortality) to the greatest extent practical in all ocean fisheries. When bycatch cannot be avoided, priority will be given to conservation and management measures that seek to minimize bycatch mortality and ensure the extended survival of such fish. These measures will be developed in consideration of the biological and ecological impacts to the affected species, the social and economic impacts to the fishing industry and associated communities, and the impacts upon the fishing, management, and enforcement practices currently employed in ocean salmon fisheries (see also Section 6.5.3).

3.4.2 Occurrence

The present bycatch and bycatch mortality estimation methodologies and procedures for salmon in salmon fisheries are documented in STT (1999d) and a compilation of SSC reviews of salmon estimation methodologies (PFMC 1997c). Bycatch of salmon in Pacific Coast trawl fisheries is documented in Amendment 12 (PFMC 1997a). Salmon fisheries or fishery practices which lack or do not have recent observation data or estimates of bycatch composition and associated mortality rates will be identified by the Council for future research priority in their biannual Research and Data Needs Report to NMFS. Future changes in the procedures and methodologies will occur only if a comprehensive technical review of existing biological data justifies a modification and is approved by the STT, SSC, and Council. All of these changes will occur within the schedule established for salmon estimation methodology review and apart from the preseason planning process.

Bycatch of fish other than salmon in salmon fisheries is generally very limited. Only hook-and-line gear is allowed in ocean salmon fisheries and regulations allow for retention of most groundfish species and limited numbers of Pacific halibut that are caught incidentally while salmon fishing.

3.4.3 Standard Reporting Methodology

Within the salmon preseason planning process, management options will be assessed for the effects on the amount and type of salmon bycatch and bycatch mortality. Estimates of salmon bycatch and incidental mortalities associated with salmon fisheries will be included in the modeling assessment of total fishery impact and assigned to the stock or stock complex projected to be impacted by the proposed management measure. The resultant fishery impact assessment reports for the ocean salmon fisheries will specify the amount of salmon bycatch and bycatch mortality associated with each accompanying management option. The final analysis of Council-adopted management measures will contain an assessment of the total salmon bycatch and bycatch mortality for ocean salmon fisheries, and include the percentage that these estimates represent compared to the total harvest projected for each species, as well as, the relative change from the previous year's total bycatch and bycatch mortality levels.

4 HABITAT AND PRODUCTION

"Any fishery management plan . . . shall . . . protect, restore, and promote the long-term health and stability of the fishery.

Magnuson-Stevens Act, §303(a)(1)

The Council will be guided by the principle that there should be no net loss of the productive capacity of marine, estuarine, and freshwater habitats which sustain commercial, recreational, and tribal salmon fisheries beneficial to the nation. Within this policy, the Council will assume an aggressive role in the protection and enhancement of anadromous fish habitat, especially essential fish habitat.

4.1 ESSENTIAL FISH HABITAT

"describe and identify essential fish habitat for the fishery . . . minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat;"

Magnuson-Stevens Act, §303(a)(7)

Protecting, restoring, and enhancing the natural productivity of salmon habitat, especially the estuarine and freshwater areas, is an extremely difficult challenge which must be achieved if salmon fisheries are to remain healthy for future generations. Section 3(10) of the Magnuson-Stevens Act defines essential fish habitat (EFH) as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The following interpretations have been made by NMFS to clarify this definition: "waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish, and may include historic areas if appropriate; "substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities; "necessary" means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species full life cycle.

4.1.1 Identification and Description

Appendix A to the *Pacific Coast Salmon Plan* contains the Council's complete identification and description of Pacific coast salmon fishery EFH, along with a detailed assessment of adverse impacts and actions to encourage conservation and enhancement of EFH. The Pacific coast salmon fishery EFH includes those waters and substrate necessary for salmon production needed to support a long-term sustainable salmon fishery and salmon contributions to a healthy ecosystem. In the estuarine and marine areas, salmon EFH extends from the nearshore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (200 nautical miles) offshore of Washington, Oregon, and California north of Point Conception. Foreign waters off Canada, while still salmon habitat, are not included in salmon EFH, because they are outside U.S. jurisdiction. The Pacific coast salmon fishery EFH also includes the marine areas off Alaska designated as salmon EFH by the North Pacific Fishery Management Council. In freshwater, the salmon fishery EFH includes all those streams, lakes, ponds, wetlands, and other currently viable water bodies and most of the habitat historically accessible to salmon (except above certain impassable natural barriers) in Washington, Oregon, Idaho, and California as identified in Table 1-1 of Appendix A. Salmon EFH includes aquatic areas above all artificial barriers except the impassible barriers (dams) listed in Table 1-2 of Appendix A. However, activities occurring above impassable barriers that are likely to adversely affect EFH below impassable barriers are subject to the consultation provisions of the Magnuson-Stevens Act. The identification and description of EFH may be modified in the future through salmon FMP amendments as new or better information becomes available.

4.1.2 Adverse Effects of Fishing on Essential Fish Habitat

To the extent practicable, the Council must minimize adverse impacts of fishing activities on salmon EFH. Fishing activities may adversely affect EFH if the activities cause physical, chemical, or biological alterations

of the substrate, and loss of or injury to benthic organisms, prey species and their habitat, and other components of the ecosystem. The marine activities under Council management authority or influence that may impact EFH are effects of fishing gear, prey removal by other fisheries, and the effect of salmon fishing on the reduction of stream nutrients due to fewer salmon carcasses on the spawning grounds. Within its fishery management authority, the Council may use fishing gear restrictions, time and area closures, or harvest limits to reduce negative impacts on EFH. Section 3.1 of Appendix A provides a description of the potential impacts on EFH from fishing activities and measures to assess or reduce those impacts. The description and measures includes both fisheries within Council management authority and those under other management jurisdictions.

In determining actions to take to minimize any adverse effects from fishing, the Council will consider the nature and extent of the impact and the practicality and effectiveness of management measures to reduce or eliminate the impact. The consideration will include long- and short-term costs and benefits to the fishery and EFH along with other appropriate factors consistent with National Standard 7 ("Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.").

4.1.3 Adverse Effects of Non-Fishing Activities on Essential Fish Habitat

> *"Each Council shall comment on and make recommendations to the Secretary and any Federal or State agency concerning any such activity (authorized, funded, or undertaken, or proposed to be undertaken by any Federal or State agency) that, in the view of the Council, is likely to substantially affect the habitat, including essential fish habitat, of an anadromous fishery resource under its authority" . . . "Within 30 days . . . a Federal agency shall provide a detailed response in writing . . ."*
>
> *Magnuson-Stevens Act, §305(b)*

The Council will strive to assist all agencies involved in the protection of salmon habitat. This assistance will generally occur in the form of Council comments endorsing protection, restoration, or enhancement programs; requesting information on and justification for actions which may adversely impact salmon production; and in promoting salmon fisheries' needs among competing uses for the limited aquatic environment. In commenting on actions which may affect salmon habitat, the Council will seek to ensure implementation of consistent and effective habitat policies with other agencies having environmental control and resource management responsibilities over production and harvest in inside marine and fresh waters.

Specific recommendations for conservation and enhancement measures for EFH are listed in Appendix A. In implementing its habitat mandates, the Council will seek to achieve the following overall objectives:

1. Work to assure that Pacific salmon, along with other fish and wildlife resources, receive equal treatment with other purposes of water and land resource development.

2. Support efforts to restore Pacific salmon stocks and their habitat through vigorous implementation of federal and state programs.

3. Work with fishery agencies, tribes, land management agencies, and water management agencies to assess habitat conditions and develop comprehensive restoration plans.

4. Support diligent application and enforcement of regulations governing ocean oil exploration and development, timber harvest, mining, water withdrawals, agriculture, or other stream corridor uses by local, state, and federal authorities. It is Council policy that approved and permitted activities employ the best management practices available to protect salmon and their habitat from adverse effects of contamination from domestic and industrial wastes, pesticides, dredged material disposal, and radioactive wastes.

5. Promote agreements between fisheries agencies and land and water management agencies for the benefit of fishery resources and to preserve biological diversity.

6. Strive to assure that the standard operation of existing hydropower and water diversion projects will protect and enhance salmon productivity.

7. Support efforts to identify and avoid cumulative or synergistic impacts in drainages where Pacific salmon spawn and rear. The Council will assist in the coordination and accomplishment of comprehensive plans to provide basinwide review of proposed hydropower development and other water use projects. The Council encourages the identification of no impact alternatives for all water resource development.

8. Support and encourage efforts to determine the net economic value of conservation by identifying the economic value of fish production under present habitat conditions and expected economic value under improved habitat conditions.

4.2 COMPENSATION FOR NATURAL PRODUCTION LOSSES

Whenever unavoidable fish population losses occur as a result of various development programs or other action, the Council will recommend compensatory measures that, to the extent practicable, meet the following guidelines:

1. Replacement of losses will be by an equivalent number of fish of the appropriate stock of the same fish species or by habitat capable of producing the equivalent number of fish of the same species that suffered the loss.

2. Mitigation or compensation programs will be located in the immediate area of loss.

3. In addition to direct losses of fish production, compensation programs will include consideration of the opportunity to fish and potential unrealized production at the time of the project.

4. Measures for replacement of runs lost due to construction of water control projects should be completed in advance of, or concurrent with, completion of the project.

4.3 ARTIFICIAL PRODUCTION

Artificial production programs can be an important component of healthy salmon fisheries. They may fall under one of four general categories: fishery enhancement, natural stock recovery, coded-wire tag indicator stock, or mitigation. To assure the effectiveness and maximize the benefits of artificial production programs, the Council recommends meeting the following objectives:

1. Maximize the continued production of hatchery stocks consistent with harvest management and stock conservation objectives.

2. Ensure that mitigation and enhancement programs, with a primary objective of producing hatchery origin salmon for harvest, minimize adverse ecological and genetic impacts to naturally producing populations (e.g., straying and mixing on the spawning grounds, unbalanced exploitation rates, loss of genetic diversity). Further, the methods employed to produce salmon for harvest should ensure high survival and high contribution rates to the fisheries targeting the enhanced stock while meeting natural stock objectives.

3. Ensure that artificial production programs designed to perpetuate and/or rebuild depressed natural populations are designed to be short-term in duration, boost the abundance of targeted natural populations over a few generations, and terminate when the population is able to sustain itself naturally.

4. Support efforts to continually review and improve the effectiveness of artificial propagation.

5 HARVEST (incorporates and modifies parts of old Chapters 3, 7,and 8)

"Conservation and management measures shall, consistent with the conservation requirements of this Act, . . . take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities."
Magnuson-Stevens Act, National Standard 8

The Council process for determining the allowable ocean fishery harvest centers primarily around protecting weak or listed natural salmon stocks while providing harvest opportunity on stronger natural and hatchery stocks in ways that conform to the plan's harvest allocation objectives. Achieving these multiple objectives is complicated by natural variability in annual stock abundance, variability in the ocean migratory routes and timing, the high degree of mixing of different salmon species and stocks in ocean fisheries, and imprecision in the estimation of these important parameters. Within this complexity and uncertainty, the Council attempts to achieve its fishery harvest objectives by using the various management tools described in Chapter 6.

Procedures for determining allowable ocean harvest vary by species, fishery complexity, available data, and the state of development of predictive tools. Descriptions of the various procedures in effect in 1984 have been documented in PFMC (1984). These procedures have and will change over time to incorporate the best science. Specific changes resulting from improvements in forecasting techniques or changes in outside/inside allocation procedures due to treaty or user sharing revisions are anticipated by the plan's framework mechanism. Such changes may be adopted without formal amendment. Changes in procedures and the rationale for such changes are described in Council documents developed during the preseason regulatory process (see Chapter 9; formerly Chapter 12), in pertinent plan amendment documents, and in various methodology reviews by the SSC.

5.1 OVERALL FISHERY OBJECTIVES

The following objectives guide the Council in establishing fisheries against a framework of ecological, social and economic considerations.

1. Establish ocean exploitation rates for commercial and recreational salmon fisheries that are consistent with requirements for stock conservation objectives within Section 3.1, specified ESA jeopardy or recovery standards, or Council adopted rebuilding plans.

2. Fulfill obligations to provide for Indian harvest opportunity as provided in treaties with the United States, as mandated by applicable decisions of the federal courts, and as specified in the October 4, 1993 opinion of the Solicitor, Department of Interior, with regard to federally recognized Indian fishing rights of Klamath River Tribes.

3. Seek to maintain ocean salmon fishing seasons which support the continuance of established recreational and commercial fisheries while meeting salmon harvest allocation objectives among ocean and inside recreational and commercial fisheries that are fair and equitable and in which fishing interests shall equitably share the obligations of fulfilling any treaty or other legal requirements for harvest opportunities.[1/]

1/ In its effort to maintain the continuance of established ocean fisheries, the Council includes consideration of maintaining established fishing communities. In addition, a significant factor in the Council's allocation objectives in Section 5.3 is aimed at preserving the economic viability of local ports and/or specific coastal communities (e.g., recreational port allocations north of Cape Falcon). Chapter 6 in Appendix B and the tables it references provide additional specific information on the fishing communities.

4. Minimize fishery mortalities for those fish not landed from all ocean salmon fisheries as consistent with optimum yield and the bycatch management specifications of Section 3.4.
5. Manage and regulate fisheries so that the optimum yield encompasses the quantity and value of food produced, the recreational value, and the social and economic values of the fisheries.

6. Develop fair and creative approaches to managing fishing effort and evaluate and apply effort management systems as appropriate to achieve these management objectives.

7. Support the enhancement of salmon stock abundance in conjunction with fishing effort management programs to facilitate a return to economically viable and socially acceptable commercial, recreational, and tribal seasons.

8. Achieve long-term coordination with the member states of the Council, Indian tribes with federally recognized fishing rights, Canada, the North Pacific Fishery Management Council, Alaska, and other management entities which are responsible for salmon habitat or production. Manage consistent with the Pacific Salmon Treaty and other international treaty obligations.

9. In recommending seasons, to the extent practicable, promote the safety of human life at sea.

5.2 MANAGEMENT CONSIDERATIONS BY SPECIES AND AREA (formerly in Section 2.0)

Following, are brief descriptions of the stock management considerations which guide the Council in setting fishing seasons within the major subareas of the Pacific Coast.

5.2.1 Chinook Salmon

5.2.1.1 South of Horse Mountain

Within this area, considerable overlap of chinook originating in Central Valley and northern California coastal rivers occurs between Point Arena and Horse Mountain. Ocean commercial and recreational fisheries are managed to address impacts on chinook stocks originating from the Central Valley, California Coast, Klamath River, Oregon Coast, and the Columbia River. With respect to California stocks, ocean commercial and recreational fisheries operating in this area are managed to maximize natural production consistent with meeting the U.S. obligation to Indian tribes with federally recognized fishing rights, and recreational needs in inland areas. Special consideration must be given to meeting the jeopardy or recovery standards for endangered Sacramento River winter chinook in the area south of Point Arena and for threatened Snake River fall chinook north of Pigeon Point. Sacramento River spring chinook are also listed as threatened under the state ESA.

5.2.1.2 Horse Mountain to Humbug Mountain (Klamath Management Zone)

Major chinook stocks contributing to this area originate in streams located along the southern Oregon/California coasts as well as the Central Valley. The primary chinook run in this area is from the Klamath River system, including its major tributary, the Trinity River. Ocean commercial and recreational fisheries operating in this area are managed to maximize natural production of Klamath River fall and spring chinook consistent with meeting the U.S. obligations to Indian tribes with federally recognized fishing rights, and recreational needs in inland areas. Ocean fisheries operating in this area must balance management considerations for stock-specific conservation objectives for Klamath River, Central Valley, California coast, Oregon coast, and Columbia River chinook stocks.

5.2.1.3 Humbug Mountain to Cape Falcon

The major chinook stocks contributing to this area primarily originate in Oregon coastal rivers located north of Humbug Mountain, as well as from the Rogue, Klamath and Central Valley systems. Allowable ocean harvests in this area are an annual blend of management considerations for impacts on chinook stocks

originating from the Central Valley, California Coast, Klamath River, Oregon Coast, Columbia River, and the Washington Coast.

5.2.1.4 North of Cape Falcon

The majority of the ocean chinook harvest in this area primarily originates from the Columbia River, with additional contributions from Oregon and Washington coastal areas, Puget Sound and some California stocks. Bonneville Pool (tules) falls and lower Columbia River (tules) falls and springs (Cowlitz), all primarily of hatchery-origin, comprise a majority of the ocean harvest between Cape Falcon, Oregon and the U.S.-Canada border. Hatchery production escapement goals of these stocks are established according to long-range production programs and/or mitigation requirements associated with displaced natural stocks. Allowable ocean harvest in this area is directed at Columbia River stocks with contributions from the Oregon Coast, Washington Coast, and Puget Sound.

5.2.2 Coho Salmon

5.2.2.1 South of Cape Falcon

Columbia River, Oregon and California coho are managed together within the framework of the Oregon Production Index (OPI) since these fish are essentially intermixed in the ocean fishery. These coho contribute to ocean fisheries off the southern Washington coast as well as to fisheries off the coasts of Oregon and northern California. Ocean fishery objectives for the OPI area address the following (1) conservation and recovery of Oregon and California coastal coho, including jeopardy or recovery standards for OCN and California coastal coho; (2) the desire for viable fisheries inside the Columbia River; and (3) impacts on conservation objectives for other key stocks.

The OPI is used as a measure of the annual abundance of adult three-year-old coho salmon resulting from production in the Columbia River and Oregon and California coastal basins. The index itself is simply the combined number of adult coho that can be accounted for within the general area from Leadbetter Point, Washington to as far south as coho are found. Currently, it is the sum of (1) ocean sport and troll fishery impacts in the ocean south of Leadbetter Point, Washington, regardless of origin; (2) Oregon and California coastal hatchery returns; (3) the Columbia River inriver runs; (4) Oregon coastal natural spawner escapement and (5) Oregon coastal inside fishery impacts. Most of the California production is from hatcheries which provide a very small portion of the total hatchery production in the OPI area.

5.2.2.2 North of Cape Falcon

Management of ocean fisheries for coho north of Cape Falcon is complicated by the overlap of OCN stocks and other stocks of concern in the vicinity of the Columbia River mouth. Allowable harvests in the area between Leadbetter Point, Washington and Cape Falcon, Oregon will be determined by an annual blend of OCN and Washington coho management considerations including:

1. Abundance of contributing stocks.
2. Stock specific conservation objectives (as found in Table 3-1).
3. Consultation standards of the Endangered Species Act.
4. Relative abundance of chinook and coho.
5. Allocation considerations of concern to the Council.

Coho occurring north of Cape Falcon, Oregon are comprised of a composite of coho stocks originating in Oregon, Washington, and southern British Columbia. Ocean fisheries operating in this area must balance management considerations for stock-specific conservation objectives for Southern Oregon/Northern California, Oregon Coast, Southwest Washington, Olympic Peninsula, and Puget Sound.

5.2.3 Pink Salmon

Ocean pink salmon harvests occur off the Washington coast and are predominantly of Fraser River origin. Pink salmon of Puget Sound origin represent a minor portion of the ocean harvest although ocean impacts can be significant in relation to the terminal return during years of very low abundance.

The Fraser River Panel of the PSC manages fisheries for pink salmon in the Fraser River Panel Area (U.S.) north of 48° N latitude to meet Fraser River natural spawning escapement and U.S./Canada allocation requirements. The Council manages pink salmon harvests in that portion of the EEZ which is not in the Fraser River Panel Area (U.S.) waters consistent with Fraser River Panel management intent and in accordance with the conservation objectives for Puget Sound pink salmon.

Pink salmon management objectives must address meeting natural spawning escapement objectives, allowing ocean pink harvest within fixed constraints of coho and chinook harvest ceilings and providing for treaty allocation requirements.

5.3 ALLOCATION

> *"Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges."*
>
> *Magnuson-Stevens Act, National Standard 4*

Harvest allocation is required when the number of fish is not adequate to satisfy the perceived needs of the various fishing industry groups and communities, to divide the catch between (non-Indian) ocean and inside fisheries and among ocean fisheries, and to provide treaty Indian fishing opportunity. In allocating the resource between ocean and inside fisheries, the Council considers both inriver harvest and spawner escapement needs. The magnitude of inriver harvest is determined by the states in a variety of ways, depending upon the management area. Some levels of inriver harvests are designed to accommodate federally recognized inriver Indian fishing rights, while others are established to allow for non-Indian harvests of historic magnitudes. Several fora exist to assist this process on an annual basis. The North of Cape Falcon Forum, a state and tribal sponsored forum, convenes the pertinent parties during the Council's preseason process to determine allocation and conservation recommendations for fisheries north of Cape Falcon. The Klamath Fishery Management Council fulfills much the same roll with regard to Klamath River salmon stocks. The individual states also convene fishery industry meetings to coordinate their input to the Council.

5.3.1 Commercial (Non-Tribal) and Recreational Fisheries North of Cape Falcon

5.3.1.1 Goal, Objectives, and Priorities

Harvest allocations will be made from a total allowable ocean harvest which is maximized to the largest extent possible but still consistent with treaty obligations, state fishery needs and spawning escapement requirements, including jeopardy standards for stocks listed under the ESA. The Council shall make every effort to establish seasons and gear requirements which provide troll and recreational fleets a reasonable opportunity to catch the available harvest. These may include single-species directed fisheries with landing restrictions for other species.

The goal of allocating ocean harvest north of Cape Falcon is to achieve, to the greatest degree possible, the objectives for the commercial and recreational fisheries as follows:

- Provide recreational opportunity by maximizing the duration of the fishing season while minimizing daily and area closures and restrictions on gear and daily limits.

- Maximize the value of the commercial harvest while providing fisheries of reasonable duration.

The priorities listed below will be used to help guide establishment of the final harvest allocation while meeting the overall commercial and recreational fishery objectives.

At total allowable harvest levels up to 300,000 coho and 100,000 chinook:

- Provide coho to the recreational fishery for a late June through early September all-species season. Provide chinook to allow (1) access to coho and, if possible, (2) a minimal chinook-only fishery prior to the all-species season. Adjust days per week and/or institute area restrictions to stabilize season duration.

- Provide chinook to the troll fishery for a May and early June chinook season and provide coho to (1) meet coho hooking mortality in June where needed and (2) access a pink salmon fishery in odd years. Attempt to ensure that part of the chinook season will occur after June 1.

At total allowable harvest levels above 300,000 coho and above 100,000 chinook:

- Relax any restrictions in the recreational all-species fishery and/or extend the all-species season beyond Labor Day as coho quota allows. Provide chinook to the recreational fishery for a Memorial Day through late June chinook-only fishery. Adjust days per week to ensure continuity with the all-species season.

- Provide coho for an all-salmon troll season in late summer and/or access to a pink fishery. Leave adequate chinook from the May through June season to allow access to coho.

5.3.1.2 Allocation Schedule Between Gear Types

Initial commercial and recreational allocation will be determined by the schedule of percentages of total allowable harvest as follows:

TABLE 5-1. Initial commercial/recreational harvest allocation schedule north of Cape Falcon.

Coho			Chinook		
Harvest (thousands of fish)	Percentage[a/]		Harvest (thousands of fish)	Percentage[a/]	
	Troll	Recreational		Troll	Recreational
0-300	25	75	0-100	50	50
>300	60	40	>100-150	60	40
			>150	70	30

a/ The allocation must be calculated in additive steps when the harvest level exceeds the initial tier.

This allocation schedule should, on average, allow for meeting the specific fishery allocation priorities described above. The initial allocation may be modified annually by preseason and inseason trades to better achieve (1) the commercial and recreational fishery objectives and (2) the specific fishery allocation priorities. The final preseason allocation adopted by the Council will be expressed in terms of quotas which are neither guaranteed catches nor inflexible ceilings. Only the total ocean harvest quota is a maximum allowable catch.

To provide flexibility to meet the dynamic nature of the fisheries and to assure achievement of the allocation objectives and fishery priorities, deviations from the allocation schedule will be allowed as provided below and as described in Section 6.5.3.2 for certain selective fisheries.

1. Preseason species trades (chinook and coho) which vary from the allocation schedule may be made by the Council based upon the recommendation of the pertinent recreational and commercial SAS representatives north of Cape Falcon. The Council will compare the socioeconomic impacts of any such

recommendation to those of the standard allocation schedule before adopting the allocation which best meets FMP management objectives.

2. Inseason transfers, including species trades of chinook and coho, may be permitted in either direction between recreational and commercial fishery quotas to allow for uncatchable fish in one fishery to be reallocated to the other. Fish will be deemed "uncatchable" by a respective commercial or recreational fishery only after considering all possible annual management actions to allow for their harvest which meet framework harvest management objectives, including single species or exclusive registration fisheries. Implementation of inseason transfers will require (a) consultation with the pertinent recreational and commercial SAS members and the STT and (b) a clear establishment of available fish and impacts from the transfer.

3. An exchange ratio of four coho to one chinook shall be considered a desirable guideline for preseason trades. Deviations from this guideline should be clearly justified. Inseason trades and transfers may vary to meet overall fishery objectives. (The exchange ratio of four coho to one chinook approximately equalizes the species trade in terms of average ex-vessel values of the two salmon species in the commercial fishery. It also represents an average species catch ratio in the recreational fishery.)

4. Any increase or decrease in the recreational or commercial total allowable catch (TAC), resulting from an inseason restructuring of a fishery or other inseason management action, does not require reallocation of the overall north of Cape Falcon non-Indian TAC.

5. The commercial TACs of chinook and coho derived during the preseason allocation process may be varied by major subareas (i.e., north of Leadbetter Point and south of Leadbetter Point) if there is a need to do so to decrease impacts on weak stocks. Deviations in each major subarea will generally not exceed 50% of the TAC of each species that would have been established without a geographic deviation in the distribution of the TAC. Deviation of more than 50% will be based on a conservation need to protect the weak stocks and will provide larger overall harvest for the entire fishery north of Cape Falcon than would have been possible without the deviation. In addition, the actual harvest of coho may deviate from the initial allocation as provided in Section 6.5.3.2 for certain selective fisheries.

6. The recreational TACs of chinook and coho derived during the preseason allocation process will be distributed among four major recreational port areas as described for coho and chinook distribution in Section 5.3.1.3. The Council may deviate from subarea quotas (1) to meet recreational season objectives based on agreement of representatives of the affected ports and /or (2) in accordance with Section 6.5.3.2 with regard to certain selective fisheries. Additionally, based on the recommendations of the SAS members representing the ocean sport fishery north of Cape Falcon, the Council will include criteria in its preseason salmon management recommendations to guide any inseason transfer of coho among the recreational subareas to meet recreational season duration objectives. Inseason redistributions of quotas within the recreational fishery or the distribution of allowable coho catch transfers from the commercial fishery may deviate from the preseason distribution.

5.3.1.3 Recreational Subarea Allocations

Coho

The north of Cape Falcon preseason recreational TAC of coho will be distributed to provide 50% to the area north of Leadbetter Point and 50% to the area south of Leadbetter Point. The distribution of the allocation north of Leadbetter point will vary, depending on the existence and magnitude of an inside fishery in Area 4B which is served by Neah Bay.

In years with no Area 4B fishery, the distribution of coho north of Leadbetter Point (50% of the total recreational TAC) will be divided to provide 74% to the area between Leadbetter Point and the Queets River (Westport), 5.2% to the area between Queets River and Cape Flattery (La Push), and 20.8% to the area north of the Queets River (Neah Bay). In years when there is an Area 4B (Neah Bay) fishery under state management, the allocation percentages north of Leadbetter Point will be modified to maintain more

equitable fishing opportunity among the ports by decreasing the ocean harvest share for Neah Bay. This will be accomplished by adding 25% of the numerical value of the Area 4B fishery to the recreational TAC north of Leadbetter Point prior to calculating the shares for Westport and La Push. The increase to Westport and La Push will be subtracted from the Neah Bay ocean share to maintain the same total harvest allocation north of Leadbetter Point. Table 5-2 displays the resulting percentage allocation of the total recreational coho catch north of Cape Falcon among the four recreational port areas (each port area allocation will be rounded to the nearest hundred fish, with the largest quotas rounded downward if necessary to sum to the TAC).

TABLE 5-2. Percentage allocation of total allowable coho harvest among the four recreational port areas north of Cape Falcon.[a/]

Port Area	Without Area 4B Add-on	With Area 4B Add-on	
Columbia River	50.0%	50.0%	
Westport	37.0%	37.0%	plus 17.3% of the Area 4B add-on
La Push	2.6%	2.6%	plus 1.2% of the Area 4B add-on
Neah Bay	10.4%	10.4%	minus 18.5% of the Area 4B add-on

a/ The Council may deviate from these percentages as described under #6 in Section 5.3.1.2.

Example distributions of the recreational coho TAC north of Leadbetter Point would be as follows:

Sport TAC North of Cape Falcon	Without Area 4B Add-On				With Area 4B Add-On [a/]					
								Neah Bay		
	Columbia River	Westport	La Push	Neah Bay	Columbia River	Westport	La Push	Ocean	Add-on	Total
50,000	25,000	18,500	1,300	5,200	25,000	19,900	1,400	3,700	8,000	11,700
150,000	75,000	55,500	3,900	15,600	75,000	57,600	4,000	13,600	12,000	25,400
300,000	150,000	111,000	7,800	31,200	150,000	114,500	8,000	27,500	20,000	47,500

a/ The add-on levels are merely examples. The actual numbers in any year would depend on the particular mix of stock abundances and season determinations.

Chinook

Subarea distributions of chinook will be managed as guidelines and shall be calculated by the STT with the primary objective of achieving all-species fisheries without imposing chinook restrictions (i.e., area closures or bag limit reductions). Chinook in excess of all-species fisheries needs may be utilized by directed chinook fisheries north of Cape Falcon or by negotiating a chinook/coho trade with another fishery participant group.

Inseason management actions may be taken by NMFS Regional Director to assure that the primary objective of the chinook harvest guidelines for each of the three recreational subareas north of Cape Falcon are met. Such actions might include: closure from 0 to 3, or 0 to 6, or 3 to 200, or 5 to 200 nautical miles from shore; closure from a point extending due west from Tatoosh Island for 5 miles, then south to a point due west of Umatilla Reef Buoy, then due east to shore; closure from North Head at the Columbia River mouth north to Leadbetter Point; change species which may be landed; or other actions as prescribed in the annual regulations.

5.3.2 Commercial and Recreational Fisheries South of Cape Falcon (Old Section 8.1.2)

[Incorporate language in footnotes a/ and c/ of Table 5-3 (old Table 8-3) which describe allowable deviations from the allocation schedule to deal with nonretention fisheries and ESA listed stocks.]

5.3.3 **Tribal Indian Fisheries**(Old Section 8.2)

[No change from 1997 *Pacific Coast Salmon Plan*]

TABLE 5-3. Allocation of allowable ocean harvest of coho salmon (thousands of fish) south of Cape Falcon.[a/]

Total Allowable Ocean Harvest	Recreational Allocation		Commercial Allocation	
	Number	Percentage	Number	Percentage
≤100	≤100[b/c/]	100[b/]	b/	b/
200	167[b/c/]	84[b/]	33[b/]	17[b/]
300	200	67	100	33
350	217	62	133	38
400	224	56	176	44
500	238	48	262	52
600	252	42	348	58
700	266	38	434	62
800	280	35	520	65
900	290	32	610	68
1,000	300	30	700	70
1,100	310	28	790	72
1,200	320	27	880	73
1,300	330	25	970	75
1,400	340	24	1,060	76
1,500	350	23	1,150	77
1,600	360	23	1,240	78
1,700	370	22	1,330	78
1,800	380	21	1,420	79
1,900	390	21	1,510	79
2,000	400	20	1,600	80
2,500	450	18	2,050	82
3,000	500	17	2,500	83

a/ The allocation schedule is based on the following formula: first 150,000 coho to the recreational base (this amount may be reduced as provided in footnote b); over 150,000 to 350,000 fish, share at 2:1, 0.667 to troll and 0.333 to recreational; over 350,000 to 800,000 the recreational share is 217,000 plus 14% of the available fish over 350,000; above 800,000 the recreational share is 280,000 plus 10% of the available fish over 800,000.
Note: The allocation schedule provides guidance only when coho abundance permits a directed coho harvest, not when the allowable impacts are insufficient to allow general coho retention south of Cape Falcon. At such low levels, allocation of the allowable impacts will be determined in the Council's preseason process. Deviations from the allocation may also be allowed to meet jeopardy standards for ESA listed stocks (e.g., the 1998 biological opinion for California coastal coho requires no retention of coho in fisheries off California).

b/ If the commercial allocation is insufficient to meet the projected hook-and-release mortality associated with the commercial all-salmon-except-coho season, the recreational allocation will be reduced by the number needed to eliminate the deficit.

c/ When the recreational allocation is 167,000 coho or less, special allocation provisions apply to the recreational harvest distribution by geographic area (unless superseded by requirements to meet a jeopardy standard for ESA listed stocks); see text of FMP as modified by Amendment 11 allocation provisions.

5.4 U.S. HARVEST AND PROCESSING CAPACITY AND ALLOWABLE LEVEL OF FOREIGN FISHING (Old Chapter 5)

> *". . . assess and specify . . . (A) the capacity and the extent to which fishing vessels of the United States, on an annual basis, will harvest the optimum yield . . . (B) the portion of such optimum yield which, on an annual basis, will not be harvested by fishing vessels of the United States and can be made available for foreign fishing, and (C) the capacity and extent to which United States processors, on an annual basis, will process that portion of such optimum yield that will be harvested by fishing vessels of the United States;"*
>
> *Magnuson-Stevens Act, §303(a)(4)*

At the highest conceivable level of recent past, present, or expected future abundance, the total allowable harvest of salmon stocks can be fully taken by U.S. fisheries. There is no recent record of processors in the Council area refusing fish from fishermen because of inadequate processing capacity. Because shore-based processors can fully utilize all the salmon that can be harvested in marine waters, joint venture processing is fixed as zero.

In view of the adequacy of the domestic fisheries to harvest the highest conceivable level of abundance, the total allowable level of foreign fishing (TALFF) also is fixed as zero. The United States allowed Canadian fishing in U.S. waters under a reciprocal agreement until 1978. Negotiations between the two governments, including those within the context of the PSC, continue to seek a resolution of all transboundary salmon issues. These negotiations are aimed at stabilizing and reducing, where possible, the interception of salmon originating from one country by fishermen of the other. No U.S./Canada reciprocal salmon fishing is contemplated in the foreseeable future.

6 *MEASURES TO MANAGE THE HARVEST* (Old Chapter 9)

[Except for renumbering, only Sections 6.5 and 6.6 have been modified, as displayed below]

6.1 MANAGEMENT BOUNDARIES AND MANAGEMENT ZONES

6.2 MINIMUM HARVEST LENGTHS FOR OCEAN COMMERCIAL AND RECREATIONAL FISHERIES

6.3 RECREATIONAL DAILY BAG LIMIT

6.4 FISHING GEAR RESTRICTIONS

6.5 SEASONS AND QUOTAS (Old Section 9.5)

For each management area or subarea, the Council has the option of managing the commercial and recreational fisheries for either coho or chinook using the following methods (1) fixed quotas and seasons; (2) adjustable quotas and seasons; and (3) seasons only. The Council may also use harvest guidelines within quotas or seasons to trigger inseason management actions which were established in the preseason regulatory process.

Quotas provide very precise management targets and work best when accurate estimates of stock abundance and distribution are available, or when needed to ensure protection of depressed stocks from potential overfishing. The Council does not view quotas as guaranteed harvests, but rather the maximum allowable harvest which assures meeting the conservation objective of the species or stock of concern. While time and area restrictions are not as precise as quotas, they allow flexibility for effort and harvest to vary in response to abundance and distribution.

* * *

6.5.3 Species-Specific and Other Selective Fisheries

6.5.3.1 Guidelines

In addition to the all-species and single or limited species seasons established for the commercial and recreational fisheries, other species-limited fisheries, such as "ratio" fisheries and fisheries selective for marked or hatchery fish, may be adopted by the Council during the preseason regulatory process. In adopting such a fishery, the Council will consider the following guidelines:

1. Harvestable fish of the target species are available.

2. Harvest impacts on incidental species will not exceed allowable levels determined in the management plan.

3. Proven, documented, selective gear exists (if not, only an experimental fishery should be considered).

4. Significant wastage of incidental species will not occur or a written economic analysis demonstrates the landed value of the target species exceeds the potential landed value of the wasted species.

5. The species specific or ratio fishery will occur in an acceptable time and area where wastage can be minimized and target stocks are maximally available.

6. Implementation of selective fisheries for marked or hatchery fish must be in accordance with U.S. v. Washington stipulation and order concerning co-management and mass marking (Case No. 9213, Subproceeding No. 96-3) and any subsequent stipulations or orders of the U.S. District Court, and consistent with international objectives under the Pacific Salmon Treaty (e.g., to ensure the integrity of the coded-wire tag program).

6.5.3.2 Selective Fisheries Which May Change Allocation Percentages North of Cape Falcon

As a tool to increase management flexibility to respond to changing harvest opportunities, the Council may implement deviations from the specified port area allocations and/or gear allocations to increase harvest opportunity through fisheries that are selective for marked salmon stocks (e.g., marked hatchery salmon). The benefits of any selective fishery will vary from year to year and fishery to fishery depending on stock abundance, the mix of marked and unmarked fish, projected hook-and-release mortality rates, and public acceptance. These factors should be considered on an annual and case-by-case basis when utilizing selective fisheries. The deviations for selective fisheries are subordinate to the allocation priorities in Section 5.3.1.1 and may be allowed under the following management constraints:

1. Selective fisheries will first be considered during the months of August and/or September. However, the Council may consider selective fisheries at other times, depending on year to year circumstances identified in the preceding paragraph.

2. The total impacts within each port area or gear group on the critical natural stocks of management concern are not greater than those under the original allocation without the selective fisheries.

3. Other allocation objectives (i.e., treaty Indian, or ocean and inside allocations) are satisfied during negotiations in the North of Cape Falcon Forum.

4. The selective fishery is assessed against the guidelines in Section 6.5.3.1.

5. Selective fishery proposals need to be made in a timely manner in order to allow sufficient time for analysis and public comment on the proposal before the Council finalizes its fishery recommendations.

If the Council chooses to deviate from the specified port and/or gear allocations, the process for establishing a selective fishery would be as follows:

1. Allocate the TAC among the gear groups and port areas according to the basic FMP allocation process described in Section 5.3.1 without the selective fishery.

2. Each gear group or port area may utilize the critical natural stock impacts allocated to its portion of the TAC to access additional harvestable, marked fish, over and above the harvest share established in step one, within the limits of the management constraints listed in the preceding paragraph.

* * *

6.6 OTHER MANAGEMENT MEASURES (Changed from "9.6 Other Harvest Controls")

[No text changes]

7 *DATA NEEDS, DATA COLLECTION METHODS, AND REPORTING REQUIREMENTS* (Old Chapter 10)

[No change]

8 SCHEDULE AND PROCEDURES FOR ANALYZING THE EFFECTIVENESS OF THE SALMON FMP (Old Chapter 11)

To effectively manage the salmon fisheries, the Council must monitor the status of the resource and the fisheries harvesting that resource to make sure that the goals and objectives of the plan are being met. Fishery resources vary from year to year depending on environmental factors, and fisheries vary from year to year depending on the state of the resource and social and economic factors. The Council must ensure that the plan is flexible enough to accommodate regulatory changes that will allow the Council to achieve its biological, social, and economic goals.

Annually, the Council's salmon team will review the previous season's commercial, recreational, and tribal Indian fisheries and evaluate the performance of the plan with respect to achievement of the framework management objectives (Chapters 2, 3, and 5). Consideration will be given by the team to the following areas:

1. Allowable harvests
2. Escapement goals, natural and hatchery
3. Mixed-stock management
4. Federally recognized tribal fishing rights
5. Allocation goals
6. Mortality factors, including bycatch
7. Achievement of optimum yield
8. Effort management systems
9. Coordination with all management entities
10. Consistency with treaties
11. Comparison with previous seasons
12. Progress of any Council-adopted recovery plan

This evaluation will be submitted annually for review by the Salmon Advisory Subpanel, SSC, and the Council.

Additionally, at various Council meetings, the Habitat Steering Group and state and tribal management entities will help keep the Council apprised of achievements and problems with regard to the protection and improvement of the environment (i.e., essential fish habitat) and the restoration and enhancement of natural production.

During the Council's annual preseason salmon management process, issues may arise which indicate a need to consider changes to the fixed elements of the FMP. Such issues may be considered in FMP amendments on an as needed basis under the guidelines of Chapter 11.

9 SCHEDULE AND PROCEDURES FOR PRESEASON MODIFICATION OF REGULATIONS (Old Chapter 12)

[No change]

10 INSEASON MANAGEMENT ACTIONS AND PROCEDURES (Old Chapter 13)

[No change]

11 SCHEDULE AND PROCEDURES FOR FMP AMENDMENT AND EMERGENCY REGULATIONS (Old Chapter 14)

Modifications not covered within the framework mechanism will require either an FMP amendment or emergency Secretarial action. The amendment process generally requires at least a year from the date of the initial development of the draft amendment by the Council. In order for regulations implementing an amendment to be in place at the beginning of the general fishing season (May 1), the Council will need to begin the process by no later than April of the previous season. It is not anticipated that amendments will be processed in an accelerated December-to-May schedule and implemented by emergency regulations.

Emergency regulations may be promulgated without an FMP or FMP amendment. Depending upon the level of controversy associated with the action, the Secretary can implement emergency regulations within 20 days to45 days after receiving a request from a Council. Emergency regulations can include non-resource emergencies and are generally in effect for 180 days. A second 180-day extension is possible if the public has had an opportunity to comment on the emergency regulation and the Council is actively preparing a plan amendment or proposed regulations to address the emergency on a permanent basis.

Part of the process for evaluating all future FMP amendment proposals will be to consider whether they will result in the need for temporary adjustments for fishery access due to weather, adverse oceanic conditions or other safety considerations.

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