ENVIRONMENTAL ASSESSMENT

FOR THE

PROPOSED 2003 MANAGEMENT MEASURES FOR THE OCEAN SALMON FISHERY

MANAGED UNDER THE PACIFIC COAST SALMON PLAN

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For

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ABBREVIATIONS AND ACRONYMS

CCC	Central California Coastal (natural coho)
Council	Pacific Fishery Management Council
CPUE	catch per unit of effort
CVI	Central Valley Index
EA	environmental assessment
EEZ	Exclusive Economic Zone
EFH	essential fish habitat
EIS	environmental Impact Statement
ESA	Endangered Species Act
ESU	evolutionarily significant unit
FMP	fishery management plan
FMU	fishery management unit
FONSI	finding of no significant impact
IPHC	International Pacific Halibut Commission
KMZ	Klamath Management Zone
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
OCN	Oregon coastal natural (coho salmon)
OPI	Oregon Production Index (area)
R/K	Rogue/Klamath (hatchery coho)
SEIS	supplemental EIS
SONCC	Southern Oregon/Northern California Coastal (natural coho)
STT	Salmon Technical Team
TAC	total allowable catch

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ABSTRACT

An environmental assessment (EA) is used to determine whether an action being considered by a federal agency has significant impacts. If such impacts are anticipated, then an environmental impact statement (EIS) must be prepared. This document analyzes the environmental and socioeconomic impacts of proposed management measures for ocean salmon fisheries occurring off the coasts of Washington, Oregon, and California. The Pacific Fishery Management Council (Council) produces four documents that provide information for decision making and report the annual management measures that are recommended for implementation in the coming fishing season. (These are the Review of 2002 Ocean Salmon Fisheries and Preseason Reports I through III, listed in the bibliography.) These documents form the basis for the description of alternatives and the impact analysis in this EA.

1 Introduction

1.1 How This Document is Organized

The Council develops annual management measures for ocean salmon fisheries occurring off the coasts of Washington, Oregon, and California[1/] and submits them to the U.S. Secretary of Commerce for review and implementation. The Secretary of Commerce then either approves and implements the measures, or disapproves them and returns them for further consideration by the Council. The scope of the measures that may be chosen in this annual process is limited by the management framework established in the Pacific Coast Salmon Plan (Salmon FMP), a fishery management plan (FMP) first developed by the Council in 1977 and subsequently amended 14 times, most recently in 1999. The Salmon FMP conforms to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the principal legislation governing fishery management within the Exclusive Economic Zone (EEZ), which extends from the outer boundary of the territorial sea to a distance of 200 nautical miles from shore.

This document has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 to assess the impacts on the human environment that may result from the proposed action. It contains the elements consistent with an Environmental Assessment (EA). The rest of this section discusses the reasons for establishing new management measures for the 2003 season. This description of *purpose and need* defines the scope of the subsequent analysis. Section 2 outlines *different alternatives* that have been considered to address the purpose and need. Based on public input and analysis of the impacts, a preferred alternative is formulated and adopted during the Council's April meeting. Section 3 describes the *affected environment*. This information provides the basis for the analysis contained in Section 4, which *assesses the potential environmental and socioeconomic impacts* of the alternatives outlined in Section 2. A list of agencies and persons consulted during preparation of the EA may be found in Section 6.3. Appendix A provides detailed information on the 2003 management measures (preferred and other alternatives) and 2002 measures, which comprise the no action alternative.

The results of the analysis of the proposed action and its alternatives are summarized in Appendix B, which is the Finding of No Significant Impact (FONSI). The FONSI is a determination that the impacts stemming from the proposed action are not significant; and, therefore, preparation of an Environmental Impact Statement is unnecessary.

1.2 Purpose and Need

1.2.1 Problems for Resolution

Salmon are anadromous fish, spending a part of their life in ocean waters, but returning to freshwater rivers and streams to spawn and then die. After rearing in freshwater for up to two years (depending on species),

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1/ In addition to these three coastal states, Council membership includes Idaho, because salmon spawn in rivers in that state.

young fish migrate to the ocean for rearing until they are ready to return to their natal rivers to spawn. Council-managed ocean salmon fisheries mainly catch chinook and coho salmon (*Oncorhynchus tshawytscha* and *O. kisutch*); pink salmon (*O. gorbuscha*) are also caught in odd-numbered years, principally off of Washington. Fisheries not managed by the Council also impact stocks that are part of the Salmon FMP management unit (Salmon FMU). These fisheries include those prosecuted by Indian Tribes and freshwater commercial and recreational fishers in state territorial and internal waters (including rivers and estuaries)as well as Canadian and Alaskan marine fisheries. Historical and contemporary habitat modification and degradation, primarily in and along rivers and streams that are critical to spawning and juvenile survival, have led to precipitous declines in West Coast salmon populations. As a result, several stocks within the salmon FMU have been listed as either threatened or endangered under the Endangered Species Act (ESA). Adult returns also fluctuate from year to year due to variability in juvenile production and survival rates.

Salmon originating from hatcheries have become an important component of all West Coast fisheries. Hatcheries have been established primarily for mitigation of development (hydropower, irrigation, etc.) and for fishery augmentation. When establishing annual management measures, the Council must set catch restrictions in order to meet the competing demands of different user groups and the need to ensure enough fish spawn, so that populations are sustained. These considerations must be applied to each stock.

1.2.2 Purpose of the 2003 Management Measures

This action, implementation of 2003 management measures, will allow fishermen to harvest surplus production of healthy natural and hatchery salmon stocks within the constraints specified under the Salmon FMP and consultation standards established for ESA-listed salmon stocks. In achieving this goal, management measures must take into account the allocation of harvest among different user groups and port areas. This is not done by stock, but rather by total allowable catch (TAC) and species. (Section 5.3 of the Salmon FMP enumerates specific allocation objectives.) The Salmon FMP also establishes nine more general harvest-related objectives:

1. Establish ocean exploitation rates for commercial and recreational salmon fisheries that are consistent with requirements for stock conservation objectives, specified ESA consultation 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 that support the continuance of established recreational and commercial fisheries while meeting salmon harvest allocation objectives among ocean and inside recreational and commercial fisheries. These allocations will be fair and equitable, and fishing interests shall equitably share the obligations of fulfilling any treaty or other legal requirements for harvest opportunities.

4. Minimize fishery mortalities for those fish not landed from all ocean salmon fisheries as consistent with optimum yield and bycatch management specifications.

5. Manage and regulate fisheries, so 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.

These objectives, along with the conservation objectives established under the ESA, provide "sideboards" for setting management measures necessary to implement the Salmon FMP, which conforms to the terms and requirements of the Magnuson-Stevens Act and the National Standards Guidelines.

1.3 Background and Related Documents

For regulatory purposes, the fishing season, or term during which annually-developed management measures apply, is May 1 to April 30. Most ocean salmon fishing occurs from early to mid-May until late September. However, it is common for seasons to open earlier than May 1 in some areas. These openings may be anticipated in the previous year's management process with an option for "inseason" modification to allow what are considered early openings (but in terms of the management cycle are actually late openings). But in terms of impacts analysis these "late openings" are considered part of the next year's season. In other words, all fishery impacts occurring after September of 2002 are modeled when analyzing impacts in the 2003 season, which for regulatory purposes starts on May 1.

Any material incorporated into this EA by reference may be obtained by contacting the Council at the address on the front of this document. In-text citations are not given for Council-produced documents referred to in this EA, but they are listed in bibliography. Copies of these documents may be obtained from the Council office.

1.3.1 Pacific Coast Salmon Plan

As mentioned above, the Salmon FMP establishes conservation and allocation guidelines for annual management. This framework allows the Council to develop measures responsive to conditions in a given year. The Salmon FMP describes the types of management measures that may be applied and the flexibility available for modification during the process of developing annual management plans. These measures include setting size limits, bag limits for recreational fishers, gear restrictions, seasons, and quotas. The alternatives described in Section 2 are structured around variations within each type of management measure. They are assessed in light of the allocation and harvest objectives in the Salmon FMP discussed above.

Sections 8 and 9 of the Salmon FMP outline the annual process for developing management measures. This process results in a review of the previous year's fishery and three preseason reports, drafted by the Council's Salmon Technical Team (STT), that reflect the information gathering, analysis, and decision-making necessary to develop annual management measures.

This management regime has been subject to several previous environmental impact analyses. From 1976 through 1983, the Council prepared an EIS or supplemental EIS (SEIS) for each year's salmon fishing season. In 1984 an EIS was prepared when the Salmon FMP was comprehensively amended to implement the framework for annual management. This resulted in a much more efficient management process and obviated the substantial staff burden of preparing an EIS or SEIS annually. A still more recent SEIS accompanied Amendment 14, which was implemented in 2001. These environmental impact analyses provide considerable basis for narrowing the scope of the analysis for this year's management measures. They also represent an information and analytical resource that, as appropriate, are incorporated into this document.

1.3.2 Review of 2002 Ocean Salmon Fisheries

This document is the first in a series of annual documents prepared by the Councils Salmon Technical Team (STT). It provides a historical context for fishery impacts, spawning escapement, and management performance for Salmon FMU stocks, annual regulations governing Council area salmon fisheries, and economic factors associated with Council area salmon fisheries. Information on inland marine and freshwater fisheries, as well as ocean fisheries in Canada and Alaska are also presented. This document provides a baseline for the fishery impacts and economic assessments used in this EA.

1.3.3 Preseason Report I

This document is the second in the series prepared by the STT, and presents projected stock abundance for Salmon FMU stocks, and an analysis of the status quo management measures on projected abundance for the coming season. This analysis serves as the no-action alternative in this EA.

1.3.4 Preseason Report II

This document is the third in the STT series. It documents the range of management options adopted by the Council for the coming season, and are released to the public for review and comment. The report includes an analysis of the effects of the management measures on conservation objectives for key Salmon FMU stocks, including those listed under the ESA, as well as an economic assessment of the options. These options serve as alternatives that are analyzed in this EA. The options also help inform managers in other forums of the likely range of ocean fishery impacts so inland marine and freshwater fisheries can be structured to achieve the necessary conservation objectives and allocation agreements.

1.3.5 Preseason Report III

This is the final document in the STT series. It details the management measures adopted by the Council for recommendation to NMFS as the coming season's regulations. It includes an analysis of the effects of the management measures on conservation objectives for key Salmon FMU stocks, an assessment of the consultation standards for ESA listed salmon, and an economic assessment. These management measures serve as the preferred alternative analyzed in this EA.

1.3.6 Area 2A Pacific Halibut Catch Sharing Plan

A catch sharing plan for Pacific halibut in area 2A (southern U.S. waters) was developed in 1995 to allocate the halibut quota among various user groups and geographic areas. The catch sharing plan included, among other things, an annual allocation of Pacific halibut for the non-Indian commercial salmon fishery, to be taken incidentally during Council area fisheries. The EA assessed the impacts of the commercial salmon fishery on the halibut resource.

1.3.7 2003 Groundfish Fishery Environmental Impact Statement

The 2003 Council area groundfish fishery management measures were the subject of an EIS that included the likely effects of Council area recreational and commercial salmon fisheries on important groundfish stocks. Alternative management measures for salmon fisheries were analyzed, but no modifications to salmon fisheries were recommended due to the insignificant impacts on groundfish stocks of concern.

1.4 Scoping Summary

The scoping process occurs early in any environmental assessment process. It involves consultation with affected and interested parties—both inside and outside of agencies implementing the management measures—in order to determine which issues, because of their potential significance, should be analyzed in depth. Just as important, this process is used to eliminate those issues that are not significant or have been addressed in other documents. This narrowing of scope allows the preparers to focus their attention on key

issues. It should be emphasized that the subject of this EA, the annual management measures for ocean salmon fisheries, falls within the scope of the Salmon FMP. As noted, the Salmon FMP establishes very specific management goals and outlines the process for developing management measures to achieve these goals. Fishery managers involved in the process often refer to the "sideboards" established in the Salmon FMP; this represents the scope of action that may be contemplated during the annual process.

Early scoping is conducted by the STT, which comprises fishery scientists from the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service, the three West Coast states, and Indian Tribes. Their review of the previous year's fishery provides information that may be relevant to issues that can surface in the coming year. After the review document is produced, the STT and Council staff compile preseason forecasts of the abundance of salmon for the coming fishing season, which for the most part begins in May, although there are limited early openings. This compilation, published as Preseason Report I, is produced in February each year and describes, to the extent practicable, the expected impacts (in terms of meeting conservation objectives) if the previous year's management measures were applied to abundance for the current season. The STT uses several linked computer models to determine fishing mortality, given a set of management measures.

The two Council meetings held in March and April each year, which focus on salmon management, provide opportunities to gain input from a broad cross-section of interested parties and the public, including those fishermen likely to be directly affected by the management actions. At the March meeting, the Salmon Advisory Subpanel, with members representing commercial and recreational fishermen, charter boat operators, Indian Tribe representatives, and conservationists, develops three "season options" covering a range from relatively low fishing mortality (more "conservative") to relatively high fishing mortality (more "liberal"). Components of each option may be developed separately for different parts of the coast by subgroups representing commercial, recreational, and tribal interests in each of the three West Coast states. An initial "draft" of these options is then analyzed by the STT, using Council-approved computer models and procedures which are calibrated to preseason abundance forecasts and expectations for fisheries outside the Council's area of responsibility (e.g., fisheries occurring in Alaskan, Canadian, and inside waters), to project the impact of management measures (e.g., the duration and timing of season openings, quota levels, retention restrictions by species for different sections of the coast) on the ability to meet the Salmon FMP conservation and allocation goals. The options may be further modified, depending on the results of the STT analysis, and are then brought before the Council for examination. The Council also receives comments and recommendations from other bodies that are involved in salmon management, including NMFS, Indian tribes, Klamath Fishery Management Council (KFMC), and state representatives that sit on the Council, as well as the general public. Council members often recommend additional modifications to the options to ensure conservation objectives and legal obligations are met, clarify provisions, or to balance catch allocation in response to socio-economic considerations. Over the course of the March meeting, management options are brought before the Council several times before refined before final options are approved for public review.

In the week after the March meeting, the STT and Council staff produce Preseason Report II, which describes each of the three options developed during the March meeting and presents the STT's analysis of their expected impacts in terms of conservation objectives, legal obligations, catch, and economic factors. Along with the Review and Preseason Report I, Preseason Report II is an information source for public hearings. These hearings are held in coastal communities between the March and April Council meetings. Along with any written comments submitted to the Council, testimony during these hearings on the three options are summarized and presented at the April Council meeting.

In addition to the Council process, notice and opportunity for public comment is provided through meetings and caucuses of State, Tribal, local governments, and the various user groups. This parallel process occurs throughout the February to April time-frame when Council recommendations are developed. The two main forums that concern salmon fisheries on the west coast are the Klamath Fishery Management Council, established at 16 U.S.C. 46085-2, which focuses on management measures directed at Klamath River fall chinook; and the North of Cape Falcon Forum, sponsored by the state of Washington and northwest Indian tribes with treaty fishing rights, which focuses on chinook and coho fisheries from Cape Falcon, Oregon to the Canadian/Washington border. Other forums include U.S. v. Oregon meetings related to ocean and Columbia River fisheries and meetings held by the Washington Fish and Wildlife Commission, the Oregon

Fish and Wildlife Commission, and the California Fish and Game Commission. Commission meetings provide opportunities for stakeholders to participate in the process of providing policy guidance to Council members and advisory body representatives. Recommendations and information from these forums are incorporated into the Council process when representatives from these entities provide comments and information at Council sponsored functions.

Finally, during the April meeting, the Council crafts the set of management measures that will regulate the coming fishing season. Although it may choose any one of the season options already developed, typically the adopted measures blend elements from these options, taking into consideration public comment, the results of deliberations in the North of Falcon and Klamath forums, and additional information regarding stock status and fishery expectations that may become available. The Council adopts fishery management measures for recommendation to the Secretary of Commerce. The STT and Council staff then prepare Preseason Report III, which describes the adopted management measures; and like the two preceding preseason reports, contains an analysis of impacts, or fishing mortality to specific stocks, expected from ocean salmon fisheries under this regime. The Council-adopted management measures are then transmitted to the U.S. Secretary of Commerce, so they may be promulgated as the federal regulations that govern ocean salmon fisheries for the year in question. (Section 6.3 lists public meetings held and agencies and persons consulted during the annual management process.)

1.5 Relevant Issues

In addition to the scoping activities described above, previous environmental impact analyses for Council-managed salmon fisheries, and other Council documents, are a valuable resource that can be used to narrow the scope of this analysis to potentially significant issues. These documents present issues that the proposed action is likely to affect and aspects of the environment that may have changed since the completion of previous analyses. Agency guidance, in the form of NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act, is a good starting point for identifying potentially significant issues. Section 6.01, which parallels NEPA implementing regulations (40 CFR 1508.27), lists 11 factors that should be used to determine the significance of any major action taken by NOAA. These are:

1. Impacts may be both beneficial and adverse -- a significant effect may exist even if the federal agency believes that on balance the effect will be beneficial.

2. Degree to which public health or safety is affected.

3. Unique characteristics of the geographic area.

4. Degree to which effects on the human environment are likely to be highly controversial.

5. Degree to which effects are highly uncertain or involve unique or unknown risks.

6. Degree to which the action establishes a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

7. Individually insignificant, but cumulatively significant impacts.

8. Degree to which the action adversely affects entities listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historic resources.

9. Degree to which endangered or threatened species, or their critical habitat as defined under the Endangered Species Act of 1973, are adversely affected.

10. Whether a violation of federal, state, or local law for environmental protection is threatened.

11. Whether a federal action may result in the introduction or spread of a nonindigenous species.

Section 6.02 of the Order enumerates a more specific set of guidelines for identifying potentially significant environmental impacts resulting from a fishery management action. These are:

a. The proposed action may be reasonably expected to jeopardize the sustainability of any target species that may be affected by the action.

b. The proposed action may be reasonably expected to jeopardize the sustainability of any non-target species.

c. The proposed action may be reasonably expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs.

d. The proposed action may be reasonably expected to have a substantial adverse impact on public health or safety.

e. The proposed action may be reasonably expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species.

f. The proposed action may be reasonably expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species.

g. The proposed action may be expected to have a substantial impact on biodiversity and ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc).

h. If significant social or economic impacts are interrelated with significant natural or physical environmental effects, then an EIS should discuss all of the effects on the human environment.

i. A final factor to be considered in any determination of significance is the degree to which the effects on the quality of the human environment are likely to be highly controversial. Although no action should be deemed to be significant based solely on its controversial nature, this aspect should be used in weighing the decision on the proper type of environmental review needed to ensure full compliance with NEPA. Socioeconomic factors related to users of the resource should also be considered in determining controversy and significance.

Both sets of guidelines are used in this assessment, but in different ways. The Section 6.02 guidelines are resource or topic specific and have been used to structure the analysis and screen for environmental components and effects that should be evaluated. Within this framework effects are evaluated based on the 11 factors listed in Section 6.01, as relevant.

As noted above, thorough scoping of the environmental assessment process should focus on those environmental components likely to be affected by the proposed action. NAO 216-6 Section 6.02 guidelines are used as a screen. If equivalent effects have already been considered in a previous environmental document, then this assessment can tier off that document. In this way effects known not to be significant and resource components known not to be affected can be eliminated from consideration. This screening process is summarized below.

6.02(a) - Salmon Fishery Management Unit: Management measures developed annually for Council-managed fisheries control, by various means, the number of fish that will be harvested. They directly affect salmon FMU populations. Because both the population status and the management measures change each year, and these changes may have significant impacts, this EA considers the impact of different harvest levels under alternatives considered by the Council. The Council's recommended management measures seek to maximize harvest opportunity by targeting stocks that have the largest harvestable surpluses (that is, fish in excess of established conservation needs) while constraining impacts on all stocks within allowable levels. The analysis focuses on fishing mortality to specific stocks, especially in relation to conservation objectives, legal obligations, and socio-economic allocations identified in the FMP. Although salmon are target species, management measures are crafted to constrain impacts to salmon stocks that are either ESA-listed or whose

status warrants critical attention. All coho stocks originating in Washington, Oregon, and California are significantly affected by Council area fisheries. Some chinook stocks are caught in such low numbers in Council area fisheries that, according to the Salmon FMP, Council action would have negligible effects on stock status (see Salmon FMP Section 3.2.4.2). Therefore, the impact of management alternatives on these salmon stocks are considered in terms of potential mortality from Council-managed fisheries along with target stocks and in terms of the specific standards established by the ESA for listed stocks, through agreement with treaty Indian tribes under the provisions of *U.S. versus Washington* and subsequent U.S. District Court Orders (see below), or the provisions of Pacific Salmon Treaty agreements.

The criteria used in this EA to evaluate the significance of alternatives in terms of sustainability of Salmon FMU stocks is meeting the conservation objectives established in the Salmon FMP, NMFS ESA consultation standards, U.S. District Court orders, and/or the Pacific Salmon Treaty.

6.02(b) - Non-target Species: Commercial salmon trollers catch a range of species aside from salmon, albeit in low numbers. The 2000 SEIS found that the impacts of the fishery on fish other than salmon were not significant (see Section 5.2.3 on page 5-5). Characteristics of the salmon fishery, such as changes in gear or method of deployment (including time and area) have not changed substantially since the SEIS was completed; however, the status of some of the non-salmon fish stocks taken as incidental catch has changed. For example, there are now nine groundfish species that have been declared overfished and for which rebuilding plans are being developed: bocaccio, cowcod, darkblotched, canary, widow, and yelloweye rockfish, Pacific ocean perch, Pacific whiting, and lingcod. These and other groundfish species are managed under the Council's groundfish FMP. Under this plan, annual management measures are established for these species and an environmental impact analysis is prepared in connection with that process, which also covers landings in the ocean salmon fishery. The EIS for 2003 groundfish management measures found that catch levels for target salmon fisheries would not have a significant impact. Although not anticipated to have a significant impact, the effect of salmon fishing on selected groundfish species is considered in this EA. The criteria used in this EA to evaluate the significance of alternatives in terms of sustainability of non-target groundfish stocks is the likelihood of landing more overfished groundfish species than recent year maximum estimated catch.

Pacific halibut (*Hippoglossus stenolepis*) is also incidentally caught in the salmon fishery, but continues to be a healthy stock. During its March and April meetings, the Council sets management measures for incidentally-caught Pacific halibut in the commercial salmon fishery. Halibut are demersal (bottom-dwelling) fish that may be caught during fisheries that target salmon. The International Pacific Halibut Commission (IPHC) manages halibut fisheries throughout the entire North American range of the fish (Alaska, British Columbia, and the U.S. West Coast) by means of allocated catch quotas. (More information on the IPHC and halibut life history and management is available from the IPHC web site, http://www.iphc.washington.edu/halcom/.) The allocation, established annually by the IPHC for the West Coast (referred to Area 2A in the IPHC's scheme of management zones), is subdivided among various user groups according to a catch sharing plan developed by the Council. This plan allocates 15% of the non-Indian commercial halibut allocation in Area 2A to the salmon troll fishery incidental catch during May and June (with provision for additional harvest from July through September if sufficient quota remains). In 1994, an EA was prepared for the catch sharing plan that allocates halibut catch among West Coast fishing sectors. The catch sharing plan is modified annually, or as necessary to accommodate changes, and an EA is prepared. Incidental catch in the salmon fishery in 2003 falls under terms of this plan and impacts are not different from those analyzed in the EAs, which concluded that they are not significant. Therefore, no further consideration of effects on Pacific halibut will be given in this EA.

6.02(c) - Affected Habitat Including Essential Fish Habitat: Appendix A of Amendment 14 (EFH Appendix A) describes salmon EFH and fishing and non-fishing impacts to this habitat. It found that there is no evidence of direct gear effects on this habitat from Council-managed salmon fisheries (page A-58). Although some types of gear, such as bottom trawls are known to have habitat impacts, these gear types are not used in the ocean salmon fisheries considered here, nor is it clear that these impacts affect habitat important to salmon. Non-fishing impacts to salmon habitat have been extensive and significant (see pages A-62 to A-110 in EFH

Appendix A). However, salmon harvest management measures do not affect the activities that cause these impacts. Because EFH impacts are extensively described and analyzed in EFH Appendix A, and this analysis demonstrates that the fishery has no significant impacts, EFH will not be considered further in this environmental assessment.

6.02(d) - Biodiversity and Ecosystem Function: The 2000 SEIS discusses impacts of the fishery to higher trophic level species including seabirds (Section 5.2.4 and 5.2.5 on pages 5-5 to 5-7) and lower trophic level species (Section 5.2.6 on page 5-7). Higher trophic level species affected by the salmon fishery include marine mammals, particularly harbor seals and sea lions. Salmon form a part of the diet of these animals, so marine mammals may compete with fisheries over this resource. These marine mammal species are opportunistic feeders and, in general, their populations have been increasing. (However, some other species' populations have been declining.) According to the SEIS analysis, there are insufficient data to distinguish between the natural and anthropogenic factors that affect these species. However, from what is known, it is unlikely that Council-managed salmon fisheries are having a significant effect. The SEIS found that direct impacts on seabirds are minimal to non-existent. Indirect impacts, due to competition for salmon and the availability of processing offal as a food source, were determined to be minimal. The SEIS notes that "any amount of harvest removes animals that otherwise would have remained in the ecosystem" to prey on lower trophic levels. However, it concludes that fishery removals are not significant in this respect and that wide-scale changes in oceanographic conditions, resulting from El Niño events for example, are the primary determinants of abundance and structure of lower trophic level populations. Maintaining biodiversity, by conserving evolutionarily significant salmon stocks, is a key management goal. Since biodiversity impacts correlate with fishing mortality to depressed and ESA-listed wild stocks, these impacts can be addressed in assessing impacts to target stocks, as discussed above. Based on the analysis in the SEIS, and the fact that determining conditions have not changed significantly, biodiversity and ecosystem impacts will not be separately considered in this document.

6.02(e) - Protected Species Interactions: Section 5.2.4 of the SEIS, referenced above, also discusses direct interactions between marine mammals and ocean salmon fishing vessels. These interactions include vessels approaching these animals, marine mammals feeding on hooked salmon, and rarely, animals that become hooked by or snagged in the gear. The SEIS concludes that these interactions do not constitute a significant impact; the document also notes that these fisheries are classified under the Marine Mammal Protection Act as Category III, indicating there is no record of such impacts. Other listed species that might be affected by the salmon fishery include sea turtles and certain seabirds. Similarly, the SEIS considered possible impacts to these species and determined they were not significant. Therefore, interactions with these protected species will not be considered here. However, various salmon, steelhead, and trout stocks (or evolutionarily significant units[2/] [ESUs]) that are potentially caught in the fishery are listed under the ESA. Since 1992, NMFS has issued biological opinions indicating ocean salmon fisheries do not jeopardize the continued existence of ESA-listed salmonids or adversely affect their critical habitat (see Section 6.2 for a list of relevant biological opinions). This determination has been reached through the Section 7 consultation or Section 4(d) determinations process pursuant to the ESA. This process established a set of "consultation standards" the fishery must satisfy in order to avoid a determination that the action jeopardizes the continued existence of a listed ESU. ESA consultation standards must be considered when developing management measures because the proposed action constrains harvest levels in response to stock status, conservation objectives, and legal obligations. As noted above, listed salmon stocks are also components of the target species, but ESA-listed stocks are considered separately under the protected species heading. The criteria used in this EA to evaluate the significance of alternatives in terms of effects on ESA listed salmon species is meeting NMFS ESA consultation standards.

6.02(f) - Public Health and Safety: Fisheries management can affect safety if, for example, season openings make it more likely that fishermen will have to go out in bad weather because fishing opportunities are limited. The EA incorporated into Amendment 8 to the Salmon FMP analyzed alternatives to adjust management

2/ An ESU constitutes a "distinct population segment" for the purposes of listing, delisting, and reclassifying species under the ESA. (See 61 FR 4722 for the current policy on recognizing distinct population segments.)

measures if unsafe weather affected fishery access. The Council's preferred alternative in the Amendment 8 EA was the no action alternative, under which weather-related issues are considered during inseason adjustments to management measures. The range of management measures considered for the proposed action would be within the range described in that EA. Since these types of potential impacts have been previously analyzed and found not to be significant, they are not discussed in this EA.

6.02(g) - Socioeconomic Environment: As noted above, socioeconomic effects are only considered if they are interrelated with environmental effects (see also 40 CFR 1508.14). The 2000 SEIS describes how management measures that could be part of the proposed action have interrelated environmental effects. Allocation of fish between different user groups is the main socioeconomic factor the Council considers when formulating annual management measures. Since management measures with these interrelated effects change from year to year, and they may cause potentially significant impacts, this environmental assessment considers certain socioeconomic effects. Overall harvest opportunities and those related to allocation can affect some communities more than others. Disproportional impacts to particular communities resulting from management alternatives are described. The criteria used in this EA to evaluate the significance of alternatives in terms of socioeconomic impacts is deviation from the low end of the range of recent community level personal income impacts generated from Council area commercial and recreational salmon fisheries, and meeting the allocation provisions of the Salmon FMP and of other relevant agreements.

6.02(h) - Cumulative Effects: This class of effects is usually considered separately, because it requires consideration of the impacts of actions other than the proposed action that may occur at different times or places. The incremental effects of these many actions may be collectively significant. In the context of salmon management, for example, past and "reasonably foreseeable" management measures may be considered as well as impacts to salmon habitat not caused by the proposed action. The effect of regulations for the ocean salmon fishery in any given year should be assessed with past and future annual regulations since they affect a given population cohort. Although habitat impacts have been considered in previous documents, the cumulative effects of these impacts when combined with fishing permitted under Council authority should also be assessed. For these reasons, cumulative effects are considered.

6.02(i) - Controversy: The final factor, controversy, is not by itself a basis for determining significance. Like other more general factors it is considered during EA preparation, but is not used to structure the analysis.

The finding of significance in the guidelines above indicates effects outside the scope of analysis in the SEIS for Amendment 14 of the Salmon FMP. For this EA, selection of alternatives with significant effects would require development of an EIS, whereas selection of alternatives without significant effects would be expected to result in a FONSI.

2 Alternatives Including the Preferred Alternative

Management alternatives applicable to this EA are developed during the annual process described above (see Section 1.4). Preseason Report I contains salmon stock abundance projections for the current year and analyzes the impacts if the previous year's management regime were to be implemented. In the NEPA context, the previous year's management regime constitutes the "no action alternative": the expected impacts without the implementation of new management measures that respond to changes in the status of the salmon stocks that are significantly affected by Council area fisheries. (According to the regulatory regime for ocean salmon fishing, the fishing season is governed by regulations established annually and apply until new measures are implemented.) Preseason Report II presents the three options developed during the March Council meeting, which represent the reasonable range of alternatives that, according to NEPA regulations, must be considered by the decision makers. The final management measures developed at the April Council meeting, and based on the options in Preseason Report II, public comment, and input from the Council's advisory bodies, represent the preferred alternative, which is described in Preseason Report III. Therefore, for the purposes of this EA there are five alternatives drawn from Preseason Reports I through III. Table 2-1 summarizes the projected impacts of these alternatives.

2.1 Preferred Alternative

The preferred alternative, which is the set of management measures adopted by the Council at its April meeting, is summarized in Preseason Report III, Tables 1-3. These tables are appended to this EA; see Appendix A.

The preferred alternative is a slight modification of Option I (the three options developed at the Council's March meeting are discussed below). Comparing the preferred alternative management measures with those in Option I, several minor refinements were made to simultaneously satisfy requirements of the Salmon Framework Plan, ESA jeopardy standards/guidelines, and Pacific Salmon Treaty obligations. Primary constraints on the 2003 proposed seasons are (1) endangered Sacramento River winter chinook south of Point Arena, California, (2) threatened California Coastal chinook between Point Arena, California and Cape Falcon, Oregon, (3) Klamath River fall chinook; (4) threatened lower Columbia River natural tule chinook north of Cape Falcon, and (5) management goals for naturally produced coho salmon over the entire Council management area, including Oregon and California coastal stocks, which are listed as threatened under the ESA, and Puget Sound and Interior Fraser (B.C.) coho which are subject to provisions of the PST. Constraints for threatened Snake River fall chinook were not a limiting factor in 2003, primarily because of continued restrictions in Canadian fisheries. Changes from Option I were also made in response to comments received at the public hearings in early April and were negotiated in an effort to increase socio-economic benefits with either negligible biological consequences or as compensation for changes with greater biological benefits. The changes include:

- A Grays Harbor Control Zone was established to provide additional protection to mature fall chinook returning to the Greys Harbor area.
- A 'C shaped' conservation area for yelloweye rockfish off the north Washington coast was established.
- From the U.S./Canada border to Leadbetter point, the recreational season was changed to begin June 22 and continue through September 14.
- From Cape Falcon to the Oregon/California border, the 2004 commercial opener was delayed from March 1 to March 15.
- From Cape Falcon to Humbug mountain, the commercial chinook size limit was increased from 26 inches to 27 inches from May 1 through September, and to 28 inches during October.
- From Humbug mountain to the Oregon/California border, fishing quotas and landing limits were slightly reduced.
- A commercial fishery between Horse mountain and Pt. Arena from July 3-14 was added.

2.2 No Action Alternative

As noted above, the no action alternative consists of the previous year's regulations. For analytical purposes, 2003 chinook and coho abundance was modeled with 2002 preseason management measures and assumptions (no 2002 inseason actions are considered). These management measures may be found in Table I-1 through I-3 of the Preseason Report III for 2002 and are reproduced in Appendix A to this EA.

2.3 Other Alternatives Considered

Management measures for the three options developed during the March Council meeting are summarized in Tables 1, 2, and 3 in the 2003 Preseason Report II. (These tables are reproduced in Appendix A.) Option I generally provides the most liberal seasons for both coho and chinook coast wide, with the exception of the commercial fishery south of Horse mountain where Option I is the most conservative. All fisheries allowing coho retention are selective for coho with a healed adipose fin clip.

All recreational and commercial non-Indian fisheries north of Cape Falcon, Oregon are managed on quotas (or guidelines) to be taken within a specified time frame. The total allowable catch (TAC) is allocated among port areas based on terms of the Salmon FMP. North of Cape Falcon the non-Indian commercial TAC is 64,400 chinook and 75,000 coho for Option I; 59,000 chinook and 62,500 coho for Option II; and 47,500 chinook and 50,000 coho for Option III. The recreational TAC north of Cape Falcon is 59,600 chinook and 225,000 coho for Option I; 56,000 chinook and 187,500 coho for Option II; and 47,500 chinook and 150,000 coho for Option III. The treaty Indian TAC north of Cape Falcon is 60,000 chinook and 90,000 coho for Option I; 40,000 chinook and 75,000 coho for Option II; and 30,000 chinook and 60,000 coho for Option III.

Fisheries south of Cape Falcon, Oregon are managed primarily by season dates, although quota fisheries within specified time frames are employed in some fisheries. Coho quotas for the central Oregon mark selective recreational coho fishery are 88,000 for Option I, 75,000 for Option II, and 60,000 for Option III. Commercial non-Indian quotas for the June-September time frame in the Oregon portion of the KMZ are 11,500 chinook in Options I and III, and 11,100 chinook in Option II. In the California portion of the KMZ, the September commercial non-Indian quota is 10,000 chinook for all three options.

TABLE 2-1. Comparison of impacts of alternatives on selected key stocks. Source for preferred alternative is Preseason Report III, for no action and options I, II, and III is Preseason Report II. (Page 1 of 2)

Impact Criterion	Preferred Alternative	No Action	Option I	Option II	Option III
Chinook					
California Central Valley (Fall chinook escapement, 1,000s of fish) Goal: 122-180	517.0	518.4	517.0	517.0	517.0
California Coast (Klamath fall chinook Age 4 harvest rate) Goal: ≤ 16%	16.0%	14.8%	15.9%	16.0%	15.9%
Klamath River (Natural spawning adults) Goal: ≥ 35,000	35,000	**26,100**	35,000	35,000	35,000
Oregon Coast			Natural spawner escapement goal met		
Columbia River Natural Tule (total exploitation rate) Goal: ≤ 49%	47%	49%	**51%**	49%	48%
Snake River Fall Index (exploitation rate as a percentage of the base period) Goal: ≤ 70%	67%	65%	64%	61%	56%
Washington Coast and Puget Sound	Conservation goals met for all stocks	Council fisheries have a minor impact on these stocks; no evaluation			
Coho					
Oregon Production Index (OPI)	Conservation goals met for all stocks; Upper Columbia sharing agreement met.	Conservation goals met for all stocks; Upper Columbia sharing agreement met.	Conservation goals met for all stocks; **Upper Columbia sharing agreement not met.**		Conservation goals met for all stocks; Upper Columbia sharing agreement met.
Washington Coast and Puget Sound	Conservation goals met for all stocks	Conservation goals met for all stocks	Conservation goals met for all stocks **except Hood Canal**	Conservation goals met for all stocks	
Canadian Stocks (Interior Fraser total exploitation rate for southern U.S. fisheries) Goal: ≤ 10%	8.3%	7.5%	**10.1%**	9.3%	8.5%

TABLE 2-1. Comparison of impacts of alternatives on selected key stocks. Source for preferred alternative is Preseason Report III, for no action and options I, II, and III is Preseason Report II. (Page 2 of 2)

Impact Criterion	Preferred Alternative	No Action	Option I	Option II	Option III
Coast wide community income associated with the non-Indian commercial troll fishery (millions $)	28.8	No dollar value determined because this alternative was not viable	29.1	29.2	28.7
Coast wide community income associated with the recreational ocean salmon fishery (millions $)	33.6	No dollar value determined because this alternative was not viable	33.6	31.4	29.4

3 Affected Environment

The following descriptions summarize information provided in the Salmon FMP and preseason reports.

3.1 Salmon Fishery Management Unit Stocks and Non-salmon Incidental Catch

3.1.1 Salmon Fishery Management Unit Stocks

Salmon are anadromous, living in the ocean, but returning to freshwater to spawn, and semelparous, dying after they spawn. Eggs are laid in nests (called redds) in stream bottoms with fairly specific characteristics, including clear, cool water and suitable gravel for redd excavation. After an incubation period, which varies depending on water temperature, the eggs hatch into yolk sac larvae, which remain in the gravel until the sac is absorbed. These fry emerge, and after maturing into smolts capable of living in salt water, migrate downstream. These smolts may pause in lakes or estuaries before entering the ocean environment. Adults then spend from one to four years in the ocean before returning to spawn. Salmon return predominantly to their natal streams to spawn. Several stocks may return to freshwater during a given season; this constitutes a seasonal "run." Therefore, management measures aim to constrain fishery impacts on distinct stocks or runs to levels appropriate for their status, as determined by the difference between projections of abundance and conservation needs.

Individual stocks exhibit considerable variability within these life history parameters: pre-spawning adult and post-hatchlings can spend varying amounts of time in freshwater, fish can mature at different ages, and ocean migration patterns can differ. In addition to natural characteristics, the development of hatchery rearing programs over the past century, has added another dimension to management. As noted in Section 1, Council-managed ocean fisheries catch mostly chinook and coho salmon, and, to a lesser extent, pink salmon in odd-numbered years.

Population sustainability is predicated on the return of a sufficient number of adult fish, referred to as escapement, and their ability to successfully spawn. (Hatchery programs have the goal of increasing survival of juvenile fish by raising them under artificial conditions where mortality is comparatively low.) Management focuses on ensuring sufficient escapement for particular stocks and must also consider the timing of the seasonal runs in setting fishing seasons. Escapement levels can be assessed by monitoring the number of fish that reach freshwater spawning areas. Alternatively managers may use allowable fishery exploitation rates instead of or in addition to escapement measures. Exploitation rates are commonly used to allow some fishing opportunity that might otherwise be precluded if management goals were based exclusively on escapement levels for depressed stocks.The abundance of hatchery-raised salmon, which in comparison to wild stocks are a less important reservoir of genetic variability,[3/] has prompted management measures that direct fishermen to target and retain hatchery stocks in preference to wild fish.

Both chinook and coho salmon have specific life history features. Chinook show considerable life history variation. In addition to age of maturity and timing of entry to freshwater, stream-type and ocean-type races have been identified. Stream-type fish spend one to two years in freshwater as juveniles before moving to the ocean. Adults enter freshwater in spring and summer, and spawn upriver in late summer or early fall. Juvenile ocean-type fish spend a few days to several months in freshwater, but may spend a long time in estuarine areas. The timing of adult entry varies from late summer-early fall into winter months. In some river systems, chinook may enter freshwater throughout a good portion of the year. However, not all runs types are equally abundant. In Oregon and Washington, spring (March through May) and fall (August through November) chinook runs are most common; a few stocks run in summer (May through July). In California there are also late fall and winter runs (December through July) in the Sacramento River. (A late fall run has also been reported from the Eel River.) Chinook salmon mature and return to spawn between two to six years

3/ Because the parent stock is fairly small, genetic diversity of these populations is lower. A related issue arises when hatchery-raised fish, returning to spawn as adults, interbreed with wild stocks, affecting wild population fitness.

of age, although most returning fish are three to five years old. Precocious males that return to spawn early, at age two or three, are called "jacks." In contrast to chinook, coho salmon have a relatively fixed residence time in fresh and salt water and mature predominantly as age 3 fish. Juveniles spend at least a year in freshwater and usually 18 months at sea before maturity. Like chinook, precocious male coho jacks return to spawn early. Although their historic range stretches south to Monterey Bay, California, most production currently occurs north of California. Most coho spawning sites are in smaller, low gradient streams and tributaries. Unlike the year round distribution of chinook runs, coho generally return to spawn in the fall. Pink salmon are caught in significant numbers in odd numbered years, such as 2003, and can be considered target species in odd numbered years for the purposes of this EA. Pink salmon spawn in areas close to salt water, and have a very short freshwater residence time as juveniles, migrating to the ocean soon after emergence. Adults return almost exclusively as 2 year olds. (Additional information about Council-managed salmons species' life histories may be found in EFH Appendix A, which describes salmon EFH.)

Salmon FMP Table 3-1 (an updated version is in Table A-1 in Appendix A of Preseason Report I) summarizes the individual West Coast stocks (or runs) identified for the purpose of managing ocean fisheries. This table describes salmon conservation objectives for each stock or run. Chinook stocks are grouped into six major geographic categories, coho into three, and pink into two. For reference, chinook and coho geographic categories and component stocks (both hatchery and wild) are listed in Table 3-1 in this document. Note that two wild chinook stocks are listed as endangered under the federal ESA and 17 are listed as threatened, and three wild coho stocks are listed as threatened. Lower Columbia River natural coho are also listed as candidate species under the federal ESA and as endangered under the Oregon State-ESA. Because salmon are anadromous, it is relatively easy to monitor the number fish that return to spawn (inriver escapement) and determine whether conservation objectives have been achieved. However, managers also need to predict ocean abundance and ocean escapement (number of fish reaching freshwater and available for inriver fisheries and escapement to spawning grounds). Although predictions cannot be made for all of the stocks listed in the Salmon FMP, estimates are made for the major stock components of the fishery. The components of the harvest for which abundance predictions are made is sufficient to allow reasonable projections of overall catch and bycatch mortality. Tables I-1 and I-2 in Preseason Report I summarize preseason estimates for the current season (2003) and several preceding years. Preseason Report I also provides detailed information on the performance of each predictor and a summary of 2003 stock status based on predictions. These summaries are reproduced in Tables 3-2a and 3-2b.

Overall, abundance projections for chinook and coho indicate that significant fisheries can be conducted off the coasts of Washington, Oregon, and California in 2003. Figures 3-1 and 3-2 display the forecast data from Preseason Report I Tables I-1 and I-2. (It should be noted that these tables use different measures for some of the stocks, such as ocean abundance versus ocean escapement, so that the comparisons made in the figures are not exact. Nonetheless, they provide a general idea of the relative abundance of different stocks. (Consult Preseason Report I for more information on the predictors.) The figures show that for most stocks chinook abundance is predicted to be slightly lower in 2003 than in 2002, with the notable exception of California Central Valley stocks. In contrast, coho salmon abundance is expected to be higher for all stocks than in 2002. Oregon Coastal Natural (OCN) coho are predicted to be up by 64%, and Oregon Production Index (OPI) hatchery coho are predicted to be up 139% from 2002 (Table 3-2).

3.1.2 Non-salmon Incidental Catch

Groundfish

These species are managed under the Council's Groundfish FMP. Under this plan annual management measures are established for these species, and an EIS is prepared in connection with that process. The annual management measures anticipate and take into account incidental groundfish in the ocean salmon fishery. This incidental groundfish catch is considered part of the open access groundfish fishery. During the groundfish process, expected groundfish bycatch in the salmon fishery is estimated, based on previous year's incidental catch levels. In 2003, no regulations specific to the ocean commercial salmon troll fishery were implemented as part of groundfish annual management. While the levels of salmon catch fluctuate from year to year, the amount of groundfish taken as incidental catch is very low, so changes in the salmon fishery do not substantially alter the projections for harvest-related mortality in the groundfish fishery (projections made

as part of the development of the groundfish annual specifications). Any unexpected expansion in incidental groundfish harvest would be taken into account in management of the groundfish open access fishery and appropriate inseason adjustments made to groundfish regulations (e.g., season closures or reduced landing limits).

Various groundfish species are caught incidentally in ocean salmon fisheries. Table 3-4 shows landings of selected, overfished groundfish species and total groundfish landings in 2000 and 2001. Five of the nine overfished species are listed in the table; of the remaining four, darkblotched rockfish, Pacific Ocean perch and cowcod are unlikely to be caught because they occur in habitats outside areas where salmon trolling occurs. The remaining species, Pacific whiting, is likely caught by trollers, but the amounts are negligible in comparison to this species' very large 2003 optimum yield (OY), which represents a total catch mortality limit across all fisheries. Although data from 2002 are not available at this time, it is not likely that there has been a substantial change in amount of groundfish catches in salmon fisheries. The table also lists OYs for the reported overfished species. It can be seen that the 2001 landings represent a small fraction of these OYs. The EIS for 2003 groundfish specifications and management measures also provides estimates of catch mortality by fishery for 2003. These estimates are generally in line with 2001 landings, except that the document reports an estimate of 1.6 mt of canary rockfish total catch for the commercial salmon troll fishery. Canary rockfish are probably of greatest concern since they have one of the lowest OYs (22 mt) so salmon troll catches represent a greater proportion of this limit.

A recreational vessel (charter or private) may target both groundfish and salmon on a single trip. Recreational groundfish catches are regulated through the groundfish management process. In 2003, various bag limits were imposed, varying by state or region and species, to limit catches of overfished species. In California south of Cape Mendocino, seasonal closures to recreational groundfish fisheries have also been implemented.

If incidental groundfish catch in the salmon fishery were to expand enough to cause increased restrictions in the open access groundfish fishery, the primary effect would depend on the nature of the restriction. If a season closure were to be imposed, the greatest burden of the reduction would be imposed on vessels targeting groundfish. Groundfish taken incidentally in fisheries targeting nongroundfish species would be discarded. If a trip limit reduction were to be imposed, the reduction would be borne primarily by the sector of the open access fishery that makes trips close to the existing limit and would be further constrained by the reduction of those limits. The effect of the constraint, whether a trip limit reduction or season closure, would be regulatory discards (to the degree that the incidental harvest is unavoidable) and discard mortality (to the degree that discarded fish die). Again, given the level of bycatch in the salmon fishery, it does not appear likely that a substantial increase in groundfish catch will be expected with the increase in salmon harvest.

Other Species

Other Council managed-species such as halibut, highly migratory species, and coastal pelagic species are also landed jointly with salmon. For all of these stocks, fish caught on the same trip with salmon are documented. Data on the commercial segment of these fisheries shows the cooccurrence rates for salmon and these other Council-managed species is low, as well as for non-Council-managed species. Changes in the salmon fishery are not expected to have a substantial impact on the directed fisheries for these non-salmon stocks. Fisheries for these non-salmon species are managed for under other Council management plans or other jurisdictions. At present these other non-salmon stocks are not the subject of overfishing concerns.

3.2 Salmon Stocks Listed Under the Endangered Species Act

ESA-listed species are managed under regulations pursuant to that law in addition to the MSA. “Take” (a term that covers a broader range of impacts than just mortality) of listed species may be allowed as long as it is not the primary purpose of the activity. (Therefore, catches of ESA-listed stocks are termed incidental take.) For salmon fisheries, this means that incidental mortality may be allowed (including, for example, fish that are released or “drop off” the hook and consequently die). As part of the process authorizing such take, regulatory

agencies must consult with NMFS[4/] in order to ensure that fisheries conducted in the Council area do not "jeopardize the continued existence of the species" (or in the case of salmon, the listed ESUs). Because of the Council's central role in developing fishery management regimes, it must take the results of such consultations into account. Typically this process, termed a "Section 7 consultation" after the relevant section in the ESA, results in a biological opinion that applies a set of "consultation standards" to the subject activity and mandates those actions that must be taken in order to avoid such jeopardy. The consultation standards, which are quantitative targets that must be met to avoid jeopardy, are also incorporated into the Salmon FMP and play an important part in developing annual management measures. A Section 7 consultation may be reinitiated periodically as environmental conditions change and new measures may be required to avoid jeopardy. (Biological opinions for Council-managed salmon stocks are listed in Section 6.2 and are available from the NMFS Northwest Region office. These documents also provide detailed information on the biology and status of these stocks.)

In addition to the Section 7 consultation, actions that fall under the jurisdiction of the ESA may also be permitted through ESA Section 10 and ESA Section 4(d). Section 10 generally covers state and research activities that may affect ESA listed species. Section 4(d) covers the activities of state and local governments and private citizens.

Section 4(d) of the ESA requires NMFS and the U.S. Fish and Wildlife Service to promulgate "protective regulations" for threatened species (Section 4(d) is not applicable to species listed as endangered) whenever it is deemed "necessary and advisable to provide for the conservation of such species."

> "Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species. The Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1) of this title ..."

These protective rules for threatened species may apply to any or all of the ESA Section 9 protections that automatically prohibit take of species listed as endangered. The rules need not prohibit all take. There may be an "exception" from the prohibitions on take so long as the take occurs as the result of a program that adequately protects the listed species and its habitat. In other words, the 4(d) rule can "limit" the situations to which the take prohibitions apply.

Sec 9(a)(1) includes the take prohibition. The Fish and Wildlife Service has adopted a blanket regulation automatically applying the take prohibition to all threatened species upon listing. NMFS has no comparable blanket 4(d) regulation. Instead, NMFS promulgates 4(d) regulations on a species-by-species basis once a species is listed as threatened.

In proposing and finalizing a 4(d) rule, NMFS may establish exemptions to the take prohibition for specified categories of activities that NMFS finds "contribute to conserving the listed salmonids." Other exemptions cover habitat-degrading activities (and tribal and recreational fishing activities) that NMFS believes are governed by a program that adequately limits impacts on listed salmonids.

As part of the process for developing annual management measures, NMFS provides guidance to the Council on minimizing the take of listed species. This guidance, a letter dated March 7, 2003, was presented to the Council during its March meeting. It describes requirements under relevant biological opinions and consultation standards for the current season. Pages 5-7 in Preseason Report II and Appendix A in Preseason Report III summarize this guidance.

For most ESA-listed stocks, NMFS guidance does not differ from the consultation standard. However, the guidance for Puget Sound chinook differs from the consultation standards summarized on page 6 of Preseason Report II. Fisheries impacting threatened naturally spawning chinook from Puget Sound and the

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4/ NMFS is the designated agency for listed marine species. The U.S. Fish and Wildlife Service is responsible for listed terrestrial species.

Strait of Juan de Fuca were exempted from ESA take limitations by virtue of being managed under a Resource Management Plan (RMP) submitted under Limit 6 of the 4(d) rule in 2001 and 2002. Though this RMP expires in May of 2003, state and tribal co-managers have established management objectives based on total exploitation rate constraints for this year. An RMP for 2003 including these objectives is currently under review by NMFS. Pending the completion of that review, NMFS provided guidance to the Council in its March and April (Preseason Report III, Appendix A) meetings. That guidance includes impacts in inside fisheries as well as ocean fisheries. The fishery regimes developed by the state and tribal managers during the preseason planning process are considered in conjunction with the Council's regimes to ensure compliance with NMFS guidance.

3.3 Socioeconomic Environment

Chapter IV in the Review of 2002 Ocean Salmon Fisheries provides information on the socioeconomic environment. More extensive information on ocean and inside salmon fisheries is provided in Appendix B to the Pacific Coast Salmon Plan. Information on fishing communities is provided in Appendices A and B to the Council's description of West Coast fishing communities.

The most significant trend in the non-Indian commercial troll fishery is a long-term decline in the real exvessel value of landings (see Figure IV-4 in the Review). This is due both to a decline in landings and declines in the real exvessel price for coho and chinook (see Figure IV-3 in the Review). The number of participants has declined and in 2002 was 78% below the 1986-1990 average. Recreational fishing for ocean salmon includes private vessels, charter boats and some shore-based fishing, although this last component accounts for a small amount of the recreational ocean catch. California exhibits the highest proportion of charter boat participation of the three states. Measured by number of trips, California also has the highest overall level of participation, and 2002 showed an increase from the previous year. Oregon and Washington, in contrast, showed decreases in participation in 2002 (Figure 3-6). Over the long term, there has been a decline in the number of ocean recreational trips with most of the decline occurring from the Eureka area north. In recent years, there has been some recovery in Washington and Oregon north of Humbug Mountain with the creation of mark-selective fisheries for fish with healed adipose fin clips.

While analysis of impacts to the natural environment is organized around stocks that spawn in particular rivers, the social dimension, including management measures, is organized around ocean management areas, as described in the Salmon FMP. These areas also correspond to some extent with the ocean distribution of salmon stocks, although stocks are mixed in offshore waters. Broadly, from north to south these areas are (1) from the U.S./Canada border to Cape Falcon (45° 46' N latitude), which is on the Oregon coast south of the Columbia River mouth; (2) between Cape Falcon and Humbug Mountain (42° 40' 30" N latitude) on Oregon's southern coast; (3) the Klamath Management Zone, which covers ocean waters from Humbug Mountain in southern Oregon to Horse Mountain (40° 05' N latitude) in northern California; and (4) from Horse Mountain to the U.S./Mexican border. (There are also numerous subdivisions within these areas. These subdivisions are used to further balance stock conservation and harvest allocation needs.) Figure 3-3 shows the boundaries of these areas and the main port areas within them. The following description of the fisheries and fishing communities is organized around these areas and is derived from the Review. For the purpose of characterizing the economic impact of Council area salmon fisheries, coastal community level personal income impacts were used (Figures 3-7a and 3-7b).

3.3.1 U.S./Canada Border to Cape Falcon

Stocks on Which the Fisheries Rely

Columbia River tule stocks comprise the bulk of the chinook salmon caught in this area, although stocks from British Columbia, Puget Sound, Central and Northern Oregon, and California also contribute. (See Preseason Report I and especially Table A-1 for details on the occurrence of stocks in ocean fisheries.) Columbia River, Washington Coast, and Puget Sound stocks are the main contributors to coho catches in this area. Indian tribes land a portion of the total catch in accordance with treaty rights. Pink salmon that contribute to fisheries in this zone originate primarily from Puget Sound and the Fraser River.

Commercial Fisheries

Figures 3-4a and 3-4b display historical commercial landings by major catch areas by state. In the figures, port areas have been grouped by management areas and show that the north of Cape Falcon area accounts for a small proportion of commercial chinook landings, about 13 percent in 2002. Coho stocks experienced serious declines in the early 1990s. Regulatory action to limit catches accounts for the immediate fall in landings; retention of coho has been prohibited south of Cape Falcon since 1993. Thus, total coho landings are small and all but some minor illegal landings are made north of Cape Falcon. (For more information on the history of these management actions refer to Amendment 13 to the Salmon FMP.) The area north of Cape Falcon covers fisheries around the Columbia River mouth and the Washington coast. Ports in this area include Neah Bay and La Push on the Olympic Peninsula; Westport on the central Washington Coast; Ilwaco, Washington on the north side of the Columbia River mouth; and Astoria, Oregon on the south side of the Columbia River mouth. (Smaller ports whose landings statistics are grouped with those of these ports are listed in footnotes to Table IV-6 through IV-8 in the Review of 2002 Ocean Salmon Fisheries.)

Tribal Fisheries

The Hoh, S'Klallam, Makah, Quileute, and Quinault tribes participate in ocean troll fisheries in the area from Grays Harbor northward. Ceremonial and subsistence fishing also occurs. There are no tribal fisheries in ocean waters south of this zone. Tribal fisheries operate in Puget Sound, Washington coastal rivers, the Columbia River, the Klamath River and other coastal bays, estuaries, and rivers. Tribal fisheries are discussed in detail in Appendix B to the EIS, prepared for Amendment 14 to the Salmon FMP.

Recreational Fisheries

In 2002, the north of Cape Falcon area accounted for 38% of the total Council-wide ocean area recreational landings of all salmon species (Table 3-3; Figure 3-5). As with commercial landings, the north of Cape Falcon area accounts for the largest share of coho landings at almost 80%. The Salmon FMP allocates a larger portion of the coho total allowable catch to the recreational fishery as reflected in the management measures. This is facilitated by allowing retention of coho with a healed adipose fin clip. In 2002, ports north of Cape Falcon accounted for 26% of recreational fishing trips in the Council area (Figure 3-6) . Almost two-thirds of these trips were made by private vessels. Westport and Columbia River ports (Astoria and Ilwaco) are the dominant ports for charter trips.

Two recreational fisheries adjacent to this ocean management area are particularly important considerations in estimating the impacts of management options for the ocean. One is referred to as the Buoy 10 recreational fishery, in reference to a navigational aid at the entrance to the Columbia River that demarcates the inner boundary between the ocean and the Columbia River. This fishery is important because it impacts a substantial portion of chinook and coho stocks from the Columbia River at a point where fish are just entering freshwater and because it also intercepts stocks destined for other river systems. The second fishery is referred to as Area 4B in reference to state waters near Neah Bay in the Strait of Juan de Fuca. Like the Buoy 10 fishery, recreational fisheries here intercept both local and non-local stocks, in this case, predominantly stocks entering Puget Sound or returning to Canadian Rivers. When the ocean fishery is open, Area 4B is managed as part of the ocean fishery; however, when the ocean fishery closes, the state will often keep the Area 4B fishery open as a state managed fishery. There is no Area 4B fishery proposed for 2003.

3.3.2 Cape Falcon to Humbug Mountain (Central Oregon Coast)

Stocks on Which the Fisheries Rely

Fisheries in this area catch a mix of stocks, which varies from year to year in response to the status of individual stocks. Oregon Coast chinook, Central Valley, and Klamath River chinook stocks contribute substantially to these fisheries. Although regulations have prohibited retention of coho in commercial fisheries south of Cape Falcon since 1993, limited recreational fishing that is selective for coho with healed adipose

fin clips has been permitted since 1999. Washington coastal, Columbia River, and Oregon, coastal coho stocks are encountered in this area.

Commercial Fisheries

Commercial landings of chinook are significant in this area. Oregon coast ports between Cape Falcon and the KMZ are the major contributors to chinook landings, along with California ports south of the KMZ; in 2002, the Cape Falcon to Humbug Mountain harvest accounted for about one-third of all commercial chinook landings from the Council area (Figure 3-4). Coho landings were very large between Cape Falcon and Humbug Mountain until 1992 when, as noted, stock declines coupled with regulatory actions eliminated most landings south of Cape Falcon. (Some mortality to coho stocks still occur in conjunction with effort targeted on chinook. Mortality from gear encounters, including drop-off and hook-and-release, is accounted for in coho mortality estimates.) Tillamook, Newport and Coos Bay are the major port areas in this zone; almost half of the chinook landings were made at Newport.

Recreational Fisheries

Central Oregon recreational coho landings accounted for almost about 19% of Council area-wide recreational coho catch (Table 3-3) and 14% of the total recreational salmon catch (Figure 3-5). Seasonal management measures allowed a selective fishery for hatchery-produced coho with a healed adipose fin clip in this area. This area accounted for 18% of Council area-wide recreational fishing trips in 2002; 84% were on private boats (Figure 3-6). Of the three ports in this area, Newport originated the most charter trips in 2002. But the two other ports (Tillamook and Coos Bay) each originated more private trips than the number of charter trips out of Newport. Thus, while Newport is an important center for charter fishing, recreational fishing on private boats is important at all of the ports in the area.

3.3.3 Humbug Mountain to Horse Mountain (Klamath Management Zone)

The KMZ covers waters in southern Oregon and northern California around the mouth of the Klamath River. This is geographically the smallest zone. A significant component of the allocation issues in this zone are the harvest needs of Klamath River tribal and sport fisheries.

Stocks on Which the Fisheries Rely

The KMZ was created to focus management on Klamath River fall chinook because the impacts of ocean fisheries have predominantly occurred in this area. Other major contributors to the harvest in this area include the Sacramento Valley and southern Oregon coast chinook stocks. Retention of coho is prohibited.

Commercial Fishery

This area accounts for a small proportion of commercial landings. In 2002, about 3% of Council area-wide commercial chinook landings were made at the three major ports in this zone: Brookings, Oregon; and Crescent City and Eureka in California (Figure 3-4).

Recreational Fishery

This area accounts for a small portion of recreational landings (Table 3-3; Figure 3-5). About 1% of Council area-wide angler trips occurred in the KMZ in 2002, with about 95% of these trips made on private vessels (Figure 3-6). Charter fishing in the zone, from a Council area-wide perspective, accounted for less than half a percent in 2002.

3.3.4 South of Horse Mountain

Although this area is defined as stretching to the U.S./Mexican border, ocean salmon fishing generally occurs from Point Conception northward.

Stocks on Which the Fisheries Rely

Central Valley chinook stocks are important throughout this area, particularly south of Fort Bragg (Point Arena). Southern Oregon chinook stocks contribute to fisheries in the northern portion of this area. Klamath chinook and Sacramento River winter run stocks are also caught in this area and the conservation needs for these stocks often have a significant effect on ocean harvest management measures. Coho retention is prohibited.

Commercial Fisheries

California commercial fisheries historically have been the major component of Council area-wide ocean salmon fishing, consistently accounting for a major share of chinook landings; 48% in 2002 and as much as 75% as recently as 2000 (Figure 3-4). Coho were less important historically than chinook; coho retention in commercial fisheries south of Cape Falcon has not been allowed since 1993.

Major ports in this area (as listed in Review Table IV-6) are Fort Bragg, San Francisco and Monterey. San Francisco is the major port for commercial landings, accounting for about two-thirds of landings at the three ports in 2002. The other two ports had a greater share of landings in the past, and as recently as 2000 Monterey landings were almost equal to San Francisco's. In 2002, Ft. Bragg accounted for the largest share of landings (17%) since 1990.

Recreational Fisheries

This area had the largest share of Council area-wide recreational chinook landings in 2002 at 58% (Table 3-3; Figure 3-5); coho landings were negligible, reflecting regulations prohibiting coho retention. (The reported landings includes some illegal harvest, as footnoted in the Review tables.) The number of recreational trips has remained more stable over the long term in the area south of Horse Mountain than in areas to the north (Figure 3-6). As a result, the number of trips occurring in this area as a proportion of coast wide trips has increased since the 1980s. In 2002, the area south of Horse Mountain accounted for the highest percent of recreational trips in the Council management area, at 46%. Charter fishing historically, and today, has accounted for a much larger fraction of recreational trips in this area, as compared to areas to the north; in 2002, 45% of trips south of Horse Mountain were made by charter vessels. San Francisco is by far the largest port for charter trips while private recreational trips are more evenly distributed among the three ports in this area.

TABLE 3-1: Chinook and coho salmon stocks managed under the Salmon FMP. (Page 1 of 1)

Chinook	Coho
California Central Valley Sacramento River Fall Sacramento River Spring (**threatened**) Sacramento River Winter (**endangered**)	Oregon Production Index Area Central California Coast (**threatened**) Northern California (**threatened**) Oregon Coastal Natural (**threatened**) Columbia River Late Hatchery Columbia River Early Hatchery Columbia River Natural **(federal candidate, Oregon State-endangered)**
Northern California Coast Eel, Mattole, Mad (**all threatened**), and Smith Rivers, Fall and Spring Klamath River Fall Klamath River Spring	
Oregon Coast Southern Oregon (aggregate of several stocks) Central and Northern Coast (aggregate of several stocks)	
Columbia River Basin North Lewis River Fall (**threatened**) Lower River Hatchery Fall Lower River Hatchery Spring Upper Willamette Spring (**threatened**) 1/ Mid-Columbia Bright Hatchery Fall Spring Creek Hatchery Fall Klickitat, Warm Springs, John Day, and Yakima Rivers Spring 1/ Snake River Fall (**threatened**) Snake River Spring/Summer (**threatened**) 1/ Upper River Bright Fall 1/ Upper River Summer Upper Columbia River Spring (**endangered**) 1/	
Washington Coast Willapa Bay Fall Natural 1/ Willapa Bay Fall Hatchery Grays Harbor Fall 1/ Grays Harbor Spring 1/ Quinault Fall 1/ Queets Fall 1/ Queets Summer/Spring 1/ Hoh Fall 1/ Hoh Spring/Summer 1/ Quillayute Fall 1/ Quillayute Spring/Summer 1/ Hoko Summer/Fall 1/	Washington Coastal Willapa Bay Hatchery Grays Harbor Quinault Hatchery Queets Hoh Quillayute Fall Quillayute Summer Hatchery Western Strait of Juan de Fuca
Puget Sound Eastern Strait of Juan de Fuca Summer/Fall (**threatened**) 1/ Skokomish Summer/Fall (**threatened**) 1/ Nooksack Spring (**threatened**) 1/ Skagit Summer/Fall (**threatened**) 1/ Skagit Spring (**threatened**) 1/ Stillaguamish Summer/Fall (**threatened**) 1/ Snohomish Summer/Fall (**threatened**) 1/ Cedar River Summer/Fall-Lake Washington (**threatened**) 1/ White River Spring (**threatened**) 1/ Green River Summer/Fall (**threatened**) 1/ Nisqually River Summer/Fall-South Puget Sound (**threatened**) 1/	Puget Sound Eastern Strait of Juan de Fuca Hood Canal Skagit Stillaguamish Snohomish South Puget Sound Hatchery
Southern British Columbia Coastal Stocks 1/ Fraser River 1/	Southern British Columbia Coast Coastal Stocks Fraser River

1/ This stock impacted at a rate of less than 5% in Council area fisheries.

TABLE 3-2a: Chinook 2003 predicted stock status. (Page 1 of 1)

Stock/Predictor	Status
Sacramento River Fall Chinook	A total of 59,100 age-two chinook are estimated to have returned to the Central Valley in 2002, forecasting a 2003 CVI of 1,108,100 adult chinook, which is 1.34 times the 2002 preseason forecast.
Klamath River Fall Chinook	The forecast September 1, 2002 (preseason) ocean abundance of Klamath River fall chinook salmon is 171,300 age-three fish, 132,400 age-four fish, and 6,500 age-five fish. This is comparable to last year's preseason forecast of 209,000 age-three, 143,800 age-four, and 9,700 age-five fish.
Oregon Coastal Chinook, North Migrating	Based on the density index of total spawners, the generalized expectation for Oregon coastal north migrating (NOC and MOC) stocks in 2003 is for above average abundance. The density of adults observed since 1985 has met or exceeded the goal of 60-90 spawners per mile, a primary indicator that these stocks are generally healthy
Oregon Coast Chinook, South/Local Migrating	A quantitative estimate is made only for Rogue River fall chinook; the ocean abundance index for 2003 is 30,900 chinook, slightly below 2002, but still the second highest the highest since 1988.
Columbia River Fall Chinook	Abundance predictions are made for five major fall stock units characterized as being hatchery or natural production and originating above or below Bonneville Dam. The upriver brights (URB) and lower river wild (LRW) are primarily naturally produced stocks. The lower river hatchery (LRH) tule, Spring Creek Hatchery (SCH) tule, and mid-Columbia brights (MCB) are primarily hatchery produced stocks. The tule stocks generally mature at an earlier age than the natural fall stocks and do not migrate as far north. Minor stocks include lower river bright (LRB), a naturally produced stock, and Select Area brights (SAB), a hatchery stock originally from Rogue River stock; both occur downstream from Bonneville Dam. The preliminary forecast for 2003 URB fall chinook ocean escapement is 280,400 adults. If the forecast is realized, it would be similar to last year's return which was the largest return since 1988 and would be the fourth largest since 1964. The forecast is about 84% greater than the recent ten-year average of 150,400. No preseason forecast for 2003 ocean escapement of ESA-listed Snake River wild fall chinook is currently available. However, the Columbia River technical staffs are expected to develop a run size estimate for this stock prior to the April Council meeting. Ocean escapement of LRW fall chinook in 2003 is forecast at 24,600 adults. The forecast indicates a return similar to last year, which was the second largest since 1989 and is almost double the recent ten-year average return of 13,500. The preliminary forecast for 2003 ocean escapement of LRH fall chinook is for a return of 115,900 adults, which would be less than last year, but still the second largest return since 1989, and nearly double the recent ten-year average of 64,800. Ocean escapement of SCH fall chinook in 2003 is projected to be 96,900 adults. Although it will be less that last year, it will still be the third largest return since 1982, and almost double the recent ten-year average of 50,600. The preliminary forecast for the 2003 ocean escapement of MCB fall chinook is 104,800 adults. The forecast would represent the largest return on record, more than last year's return, and more than double the recent ten-year average of 49,100. The MCB chinook are primarily returns from hatchery releases of bright fall chinook stock in the area downstream from McNary Dam, although some natural spawning in tributaries between Bonneville and McNary dams also occurs.
Washington Coastal Chinook	Preseason forecasts for most Washington coastal chinook stocks were not available for inclusion in Preseason Report I. The Willapa Bay hatchery fall chinook ocean escapement abundance forecast is 14,200 adults, down approximately 24% from the 2002 preseason forecast. The natural fall chinook ocean escapement abundance forecast is 2,400 adults, down approximately 35% from the 2002 preseason forecast.
Puget Sound Chinook	Spring chinook originating in Puget Sound are expected to remain depressed. Runs in the Nooksack, Skagit, White, and Dungeness rivers are of continuing concern. Preliminary information for Puget Sound summer/fall stocks indicates the total 2003 return is expected to be similar to the 2002 preseason forecast for both hatchery and natural stocks. Natural stocks from Puget Sound have experienced poor survival in recent years, resulting in depressed production and escapements. Only four natural Puget Sound summer/fall chinook stocks have met escapement goals at least once in the last five years (Hoko, Snohomish, Green, and Nisqually). However, two of these stocks (Green and Nisqually) have significant numbers of hatchery chinook that stray into natural spawning areas and are counted as natural fish.

TABLE 3-2b. Coho 2003 predicted stock status. (Page 1 of 2)

Stock/Predictor	Status
Oregon Production Index Area–Public Hatchery Coho	The OPIH abundance prediction for 2003 is 863,100 coho, 239% of the 2002 prediction and 131% of the preliminary 2002 postseason estimate. The increase in predicted OPIH coho from 2002 to 2003 is primarily due to higher hatchery jack returns in 2002 relative to 2001.
Oregon Production Index Area–Oregon Coastal Natural Coho	The 2003 preseason prediction for OCN (river and lake systems combined) is 117,900 coho, 164% of the 2002 preseason prediction and 39% of the 2002 postseason estimate. The 2003 preseason SRS prediction for OCNR and OCNL components are 97,800 and 20,100 coho, respectively.
Oregon Production Index Area–Salmon and Trout Enhancement Program Hatchery Coho	The 2003 preseason STEP index abundance prediction is 3,600 coho. The 2003 prediction is above the 2002 preseason prediction of 600 coho due to improved smolt to adult survival rates.
Washington Coastal and Puget Sound Coho Stocks	
Willapa Bay	The 2003 Willapa Bay hatchery coho abundance forecast is 46,700 ocean recruits, a 16% increase from the 2002 preseason forecast of 40,400. The prediction is based on a recent four year mean return per release without adjustment for jack abundance. The natural coho ocean abundance forecast is 31,800 ocean recruits. This prediction is the average terminal run size estimate from 1998-2001.
Grays Harbor	The abundance forecast for Grays Harbor natural stock coho for 2003 is 58,018 ocean recruits. The forecast for hatchery stock ocean abundance is 64,000 adults. The natural coho forecast was generated by estimating a terminal run size using a recent six year average (1991-1996) return per spawner, which was then expanded to ocean abundance using Bingham Creek wild coded-wire tag recovery data. The hatchery forecast was generated by multiplying smolt releases by an average ocean recruit per release survival rate.
Quinault River	The 2003 forecast for Quinault natural coho is 47,700 ocean recruits, a 62% increase from the 2002 projected level of 29,400. This estimate represents the 2000 brood year escapement (11,474) multiplied by the 1993-1997 brood year average ocean recruits per spawner (4.16). The Quinault hatchery coho forecast is 20,600 ocean recruits, an increase of 75% compared to the 2002 forecast level of 11,750. The forecast is derived from the mean 1994-1998 brood year observed marine survival rates (0.0326) and 2000 brood year smolt release (631,300).
Queets River	The Queets natural coho forecast is 24,000 ocean recruits, an increase of 92% compared to the 2002 forecast level of 12,500. This forecast represents the estimated smolt production multiplied by a projected survival of 6.03%, based on Bingham Creek jack returns and the 1997-2001 average ocean recruits/smolt. The forecast for supplemental production is 1,300 ocean recruits, based on releases (111,380) multiplied by the 1995-1997 brood year average recruits/release (0.0121). Approximately 50% of supplemental releases were adipose fin clipped. The Queets hatchery (Salmon River) coho forecast is 24,900 ocean recruits, an increase of 78% compared to the 2002 forecast level of 14,000. This forecast is based on the smolt release of 875,300 multiplied by the 1996-1999 brood year average observed marine survival rate (0.0284).
Hoh River	The Hoh River natural coho forecast is 12,500 ocean recruits, an increase of 47% compared to the 2002 forecast of 8,500. This forecast is based on estimated smolt production per square mile of watershed (based on Clearwater tributary to the Queets) multiplied by the size of the Hoh watershed for a total of 178,000 smolts. The total smolt production is then multiplied by 7%, the average of two point estimates of marine survival based on the Bingham Creek jack return model. No hatchery production is projected for the Hoh system for 2003.

TABLE 3-2b. Coho 2003 predicted stock status. (Page 2 of 2)

Stock/Predictor	Status
Quillayute River	The Quillayute River summer natural and hatchery coho forecasts for 2003 are 1,800 and 5,400 ocean recruits, respectively. The natural component run size is based on estimated smolt production (26,200) and a projected ocean survival rate of 0.07 based on Bingham Creek jack return data. The hatchery component run forecast is based on 1980-1993 brood year average ocean recruits per release (0.0253) multiplied by the number of smolts released (215,300). The 2003 forecast abundance of natural summer coho is 50% above the 2002 forecast while the hatchery forecast is 10% above the 2002 forecast level. The Quillayute River fall natural and hatchery coho forecasts are 24,900 and 15,200 ocean recruits, respectively. The forecast of the natural component run size is based on the estimated smolt production (348,900), multiplied by the projected ocean survival rate of 0.07 derived from Bingham Creek jack return data. The smolt production estimate was derived from the smolt production estimate from the Clearwater River tributary of the Queets. During 1987, 1988, and 1990, smolt production in the Clearwater was 1.32 times the average production of the Bogachiel and Dickey. Using 1.32 as a scalar for higher gradient tributaries of the Quillayute system (Bogachiel, Calawah, and Sol Duc), yields an estimated 286,800 smolts (1.32*217,257). Because the Dickey is a lower gradient system, smolt production was estimated at its average production of 88,300. Total smolt production of summer and fall coho was estimated as 375,100 (1.32*217,257+88,344); smolt production for fall and summer components was proportioned according to brood year spawning escapements (348,900 fall and 26,200 summer). The hatchery production forecast is based on average ocean recruits per release (0.0247) multiplied by the number of smolts released (616,800). The 2003 forecast abundances of natural and hatchery components of Quillayute fall coho are 12% and 1% above their respective 2002 forecast levels.
North Washington Coast Independent Tributaries	The 2003 forecast of natural coho production for these independent streams is 14,900 based on a prediction of 500 smolts per square mile of watershed drainage (212,000 smolts based on 424 square miles of watershed) and an expectation for marine survival of 0.07. The marine survival projection was derived from jack-adult information collected at the WDFW Bingham Cr. research station. The hatchery forecast of 10,700 is based on average brood year 1988-1997 marine survivals (0.047 to December Age 2) from the Makah National Fish Hatchery, multiplied by the 2000 brood year release (304,300) from the Makah National Fish Hatchery, converted to ocean recruits (by dividing the product by 1.33).
Puget Sound	The 2003 total hatchery and wild coho ocean recruit forecast for Puget Sound is 1,029,600, 27% above the year 2002 forecast. The hatchery forecast of 493,200 is 10% over the 2002 forecast. The wild forecast of 536,400 is 49% above the 2002 forecast. The 2003 forecasts for Strait of Juan de Fuca natural and hatchery coho ocean recruits are 25,563 and 18,609, respectively. The estimate is derived by multiplying the estimated natural smolt production by the predicted marine survival rate (0.076%). The 2003 forecasts for Nooksack-Samish natural and hatchery coho ocean recruits are 16,360 and 66,174, respectively. The forecast is the product of projected smolt production from these basins and a predicted marine survival rate. The 2003 forecasts for Skagit natural and hatchery coho ocean recruits are 116,626 and 10,385, respectively. The estimate is derived by multiplying the estimated natural smolt production by the predicted marine survival rate. The 2003 forecast for Stillaguamish natural coho ocean recruits is 37,800. No hatchery production is anticipated. The Stillaguamish wild coho ocean survival rate (0.09%) was developed from the 1997 and 1998 brood year Wallace River Hatchery coho marine survival rates. The 2003 forecasts for Snohomish natural and hatchery coho ocean recruits are 203,00 and 35,400, respectively. The Snohomish wild coho prediction was developed from a recruit per spawner times the Wallace River Hatchery coho marine survival rate. The Snohomish Hatchery coho prediction was based on the Wallace River Hatchery coho marine survival rate. The 2003 forecasts for South Puget Sound natural and hatchery coho ocean recruits are 103,600 and 315,648, respectively. The estimate is derived by multiplying the estimated natural smolt production based on watershed area by the predicted marine survival rate. The 2003 forecasts for Hood Canal natural and hatchery coho ocean recruits are 33,437 and 46,963, respectively. The 2002 Hood Canal natural coho forecast is based on an average of four different regressions of Big Beef Creek jacks versus Hood Canal December age-two run sizes.

TABLE 3-3: Recreational landings by port and area in 2002 (thousands of fish and percent). (Page 1 of 1)

Port/Zone	Chinook	Coho	Total
North of Falcon			
Neah Bay	5.2 (1.8%)	8.4 (7.6%)	13.6 (3.4%)
La Push	2.0 (0.7%)	1.7 (1.5%)	3.7 (0.9%)
Westport	42.6 (15.0%)	19.1 (17.2%)	61.7 (15.6%)
Ilwaco	8.0 (2.8%)	45.0 (40.6%)	53.0 (13.4%)
Astoria	2.7 (1.0%)	14.4 (13.0%)	17.1 (4.3%)
Total	**60.6 (21.3%)**	**88.5 (79.8%)**	**149.1 (37.7%)**
Falcon to Humbug			
Tillamook	8.8 (1.7%)	5.8 (5.2%)	14.6 (3.7%)
Newport	6.5 (3.6%)	10.5 (9.5%)	17.0 (4.3%)
Coos Bay	19.1 (6.5%)	5.2 (4.7%)	24.3 (6.2%)
Total	**34.3 (11.7%)**	**21.5 (19.4%)**	**55.8 (14.1%)**
KMZ			
Brookings	9.9 (4.9%)	0.1 (0.1%)	10.0 (2.5%)
Crescent City	1.1 (1.5%)	0.0 (0 .0%)	1.1 (0.3%)
Eureka	15.0 (7.1%)	0.3 (0.3%)	15.3 (3.9%)
Total	**26.0 (13.5%)**	**0.4 (0.4%)**	**26.4 (6.7%)**
South of Horse Mt.			
Fort Bragg	31.0 (16.9%)	0.2 (0.2%)	31.2 (7.9%)
San Francisco	86.5 (27.0%)	0.3 (0.3%)	86.8 (22.0%)
Monterey	45.8 (13.4%)	0.0 (0.0%)	45.8 (11.6%)
Total	**163.3 (57.4%)**	**0.5 (0.5%)**	**163.8 (41.5%)**
Council Area Total	**284.1 (100.0%)**	**110.9 (100.0%)**	**395.1 (100.0%)**

TABLE 3-4. Incidental overfished groundfish landings (lbs) in non-Indian commercial salmon troll fisheries by salmon management area for 2000 and 2001.[1/] (Page 1 of 1)

Port Area/Year	Lingcod	Bocaccio	Species Canary	Widow	Yelloweye [2/]	All Groundfish [3/]
Neah Bay-La Push						
2000	NA	NA	469	65	205	5,788
2001	NA	NA	175	40	101	5,900
Westport-Astoria						
2000	NA	NA	119	15	-	2,399
2001	NA	NA	97	-	-	835
Central Oregon						
2000	NA	NA	2,332	102	132	18,250
2001	NA	NA	1,264	136	99	18,274
Oregon KMZ						
2000	NA	NA	167	9	4	1,693
2001	NA	NA	185	70	9	1,867
California KMZ						
2000	-	NA	-	-	-	249
2001	40	NA	-	-	-	64
Fort Bragg						
2000	50	12	91	-	NA	711
2001	121	9	61	22	NA	470
San Francisco						
2000	455	106	115	6	NA	2,971
2001	439	2	51	-	NA	807
Monterey-Conception						
2000	183	311	65	-	NA	2,308
2001	-	16	8	-	NA	166
Total						
2000	688	429	3,357	197	341	34,369
2001	600	27	1,841	268	209	28,382
Total (mt)						
2000	0.31	0.20	1.53	0.09	0.16	15.62
2001	0.27	0.01	0.84	0.12	0.10	12.90
2003 OY	651	<20	44	832	22	

1/ Salmon troll landings are defined as those for which salmon represents at least 50% by weight of the total ticketed landing. Other overfished groundfish (darkblotched rockfish, Pacific Ocean perch, cowcod and whiting) are not recorded as landed. N/A indicates that individual species estimates were not made. Data from PacFIN.

2/ Yelloweye rockfish were not separated on landing tickets, so a proxy of shelf rockfish with an exvessel value of >$1.00/lb was used for areas north of Cape Mendocino. For areas south of Cape Mendocino yelloweye catch was not estimated, however landings are assumed negligible because of species distribution, the absence of commercial landings in the area between Cape Mendocino and the OR/CA border, and the scarcity of recreational landings in California.

3/ All Groundfish category includes species where individual estimates were not available.

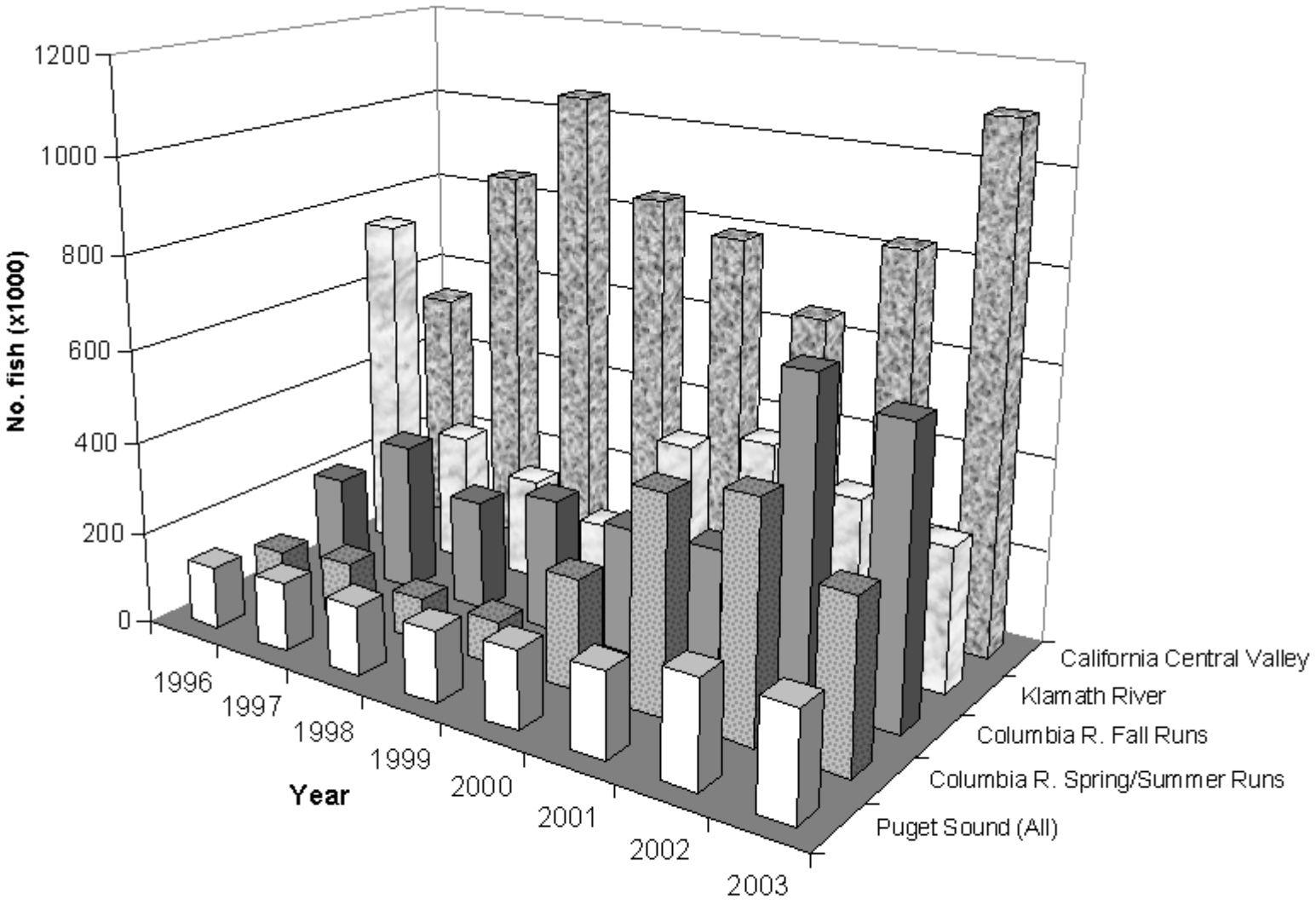

Figure 3-1: Preseason chinook forecasts.

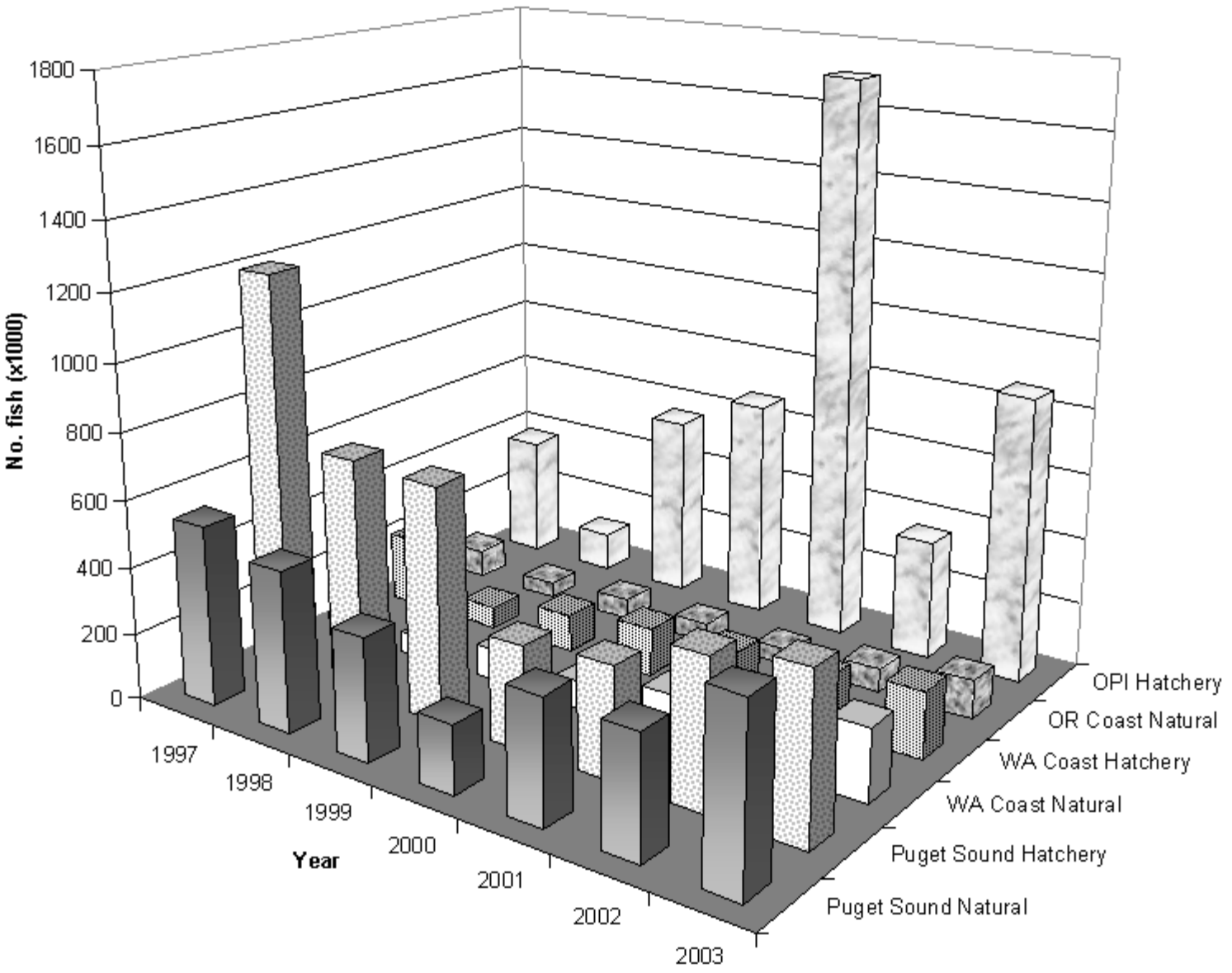

Figure 3-2: Preseason coho salmon forecasts.

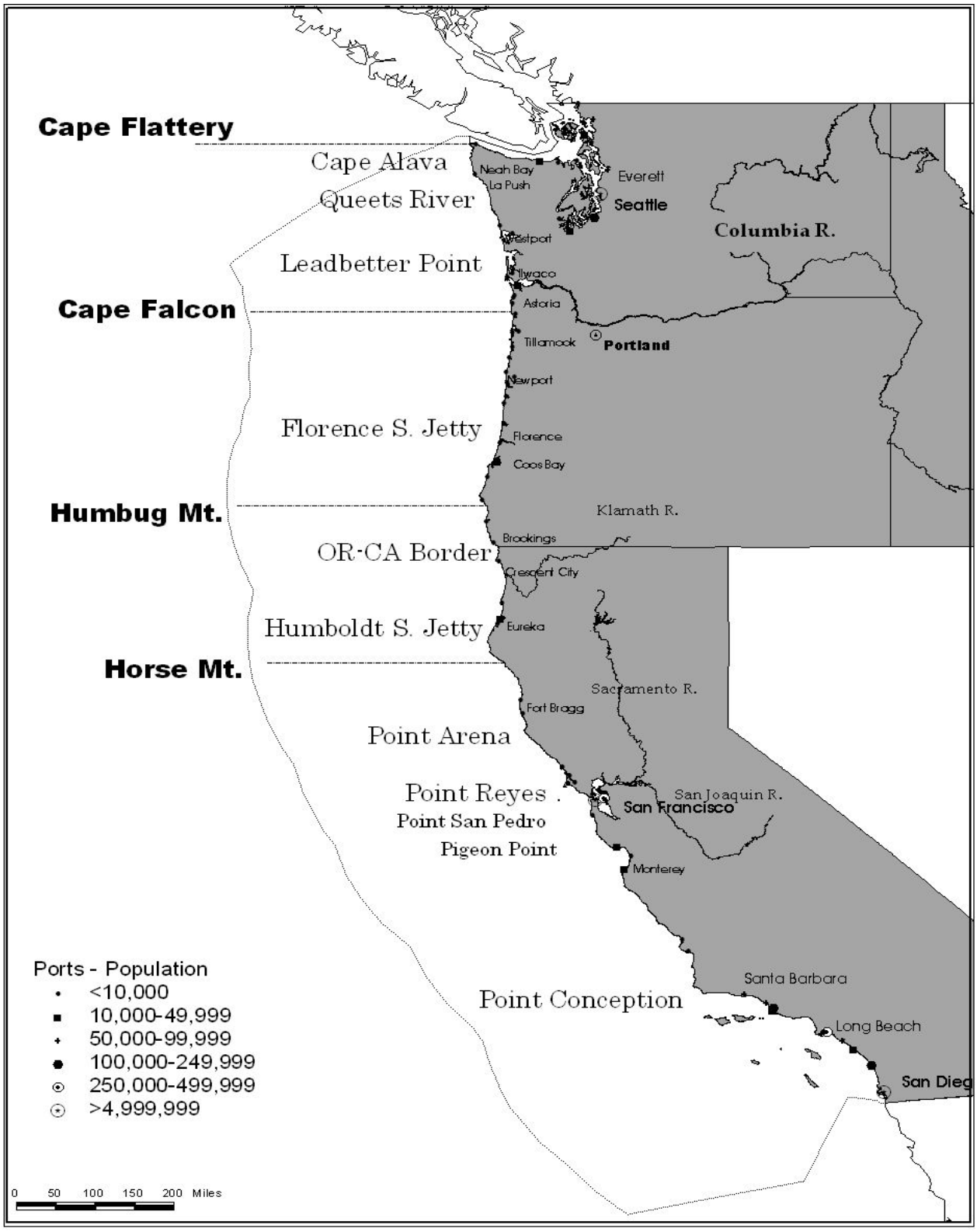

Figure 3-3: Salmon management zones and ports.

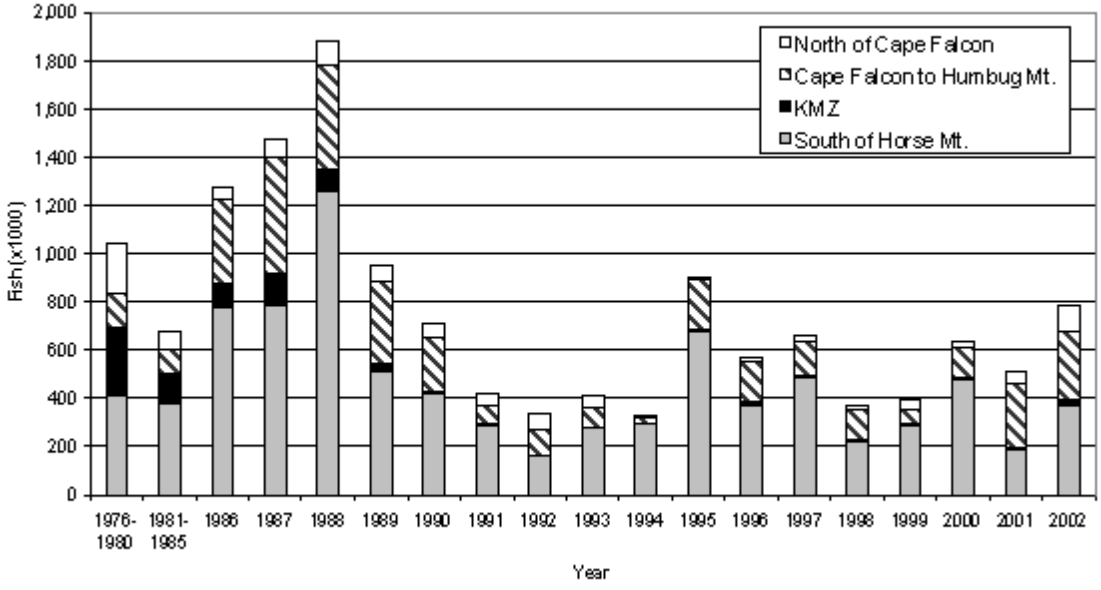

Figure 3-4a. Treaty Indian and non-Indian commercial chinook landings by zone (source: Review of 2002 Ocean Salmon Fisheries).

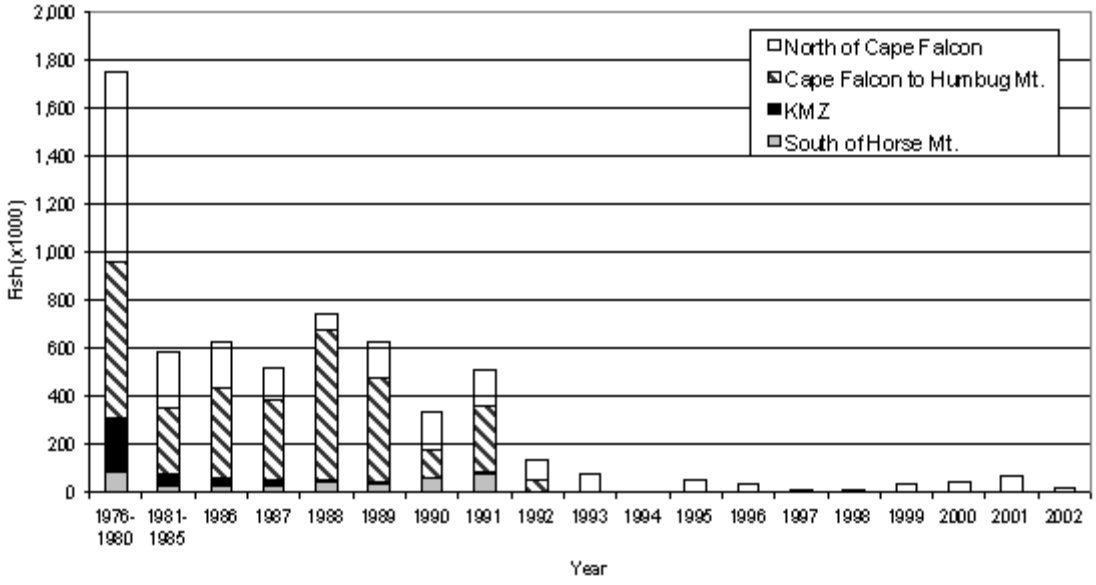

Figure 3-4b. Treaty Indian and non-Indian commercial coho landings by zone (source: Review of 2002 Ocean Salmon Fisheries).

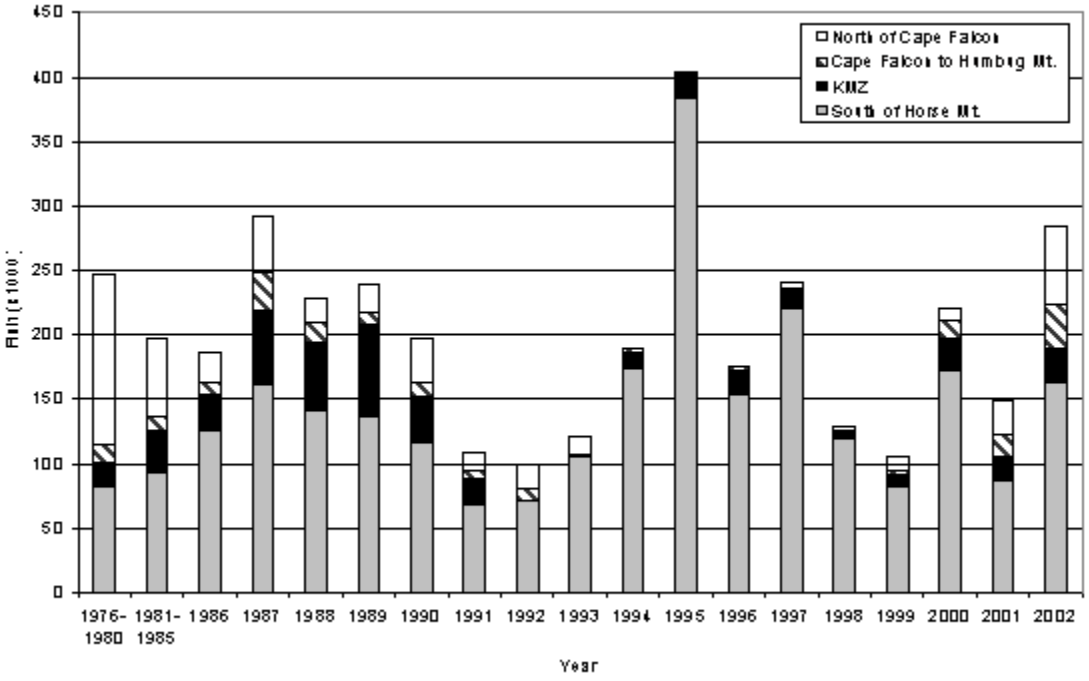

Figure 3-5a. Recreational chinook landings by zone (source: Review of 2002 Ocean Salmon Fisheries).

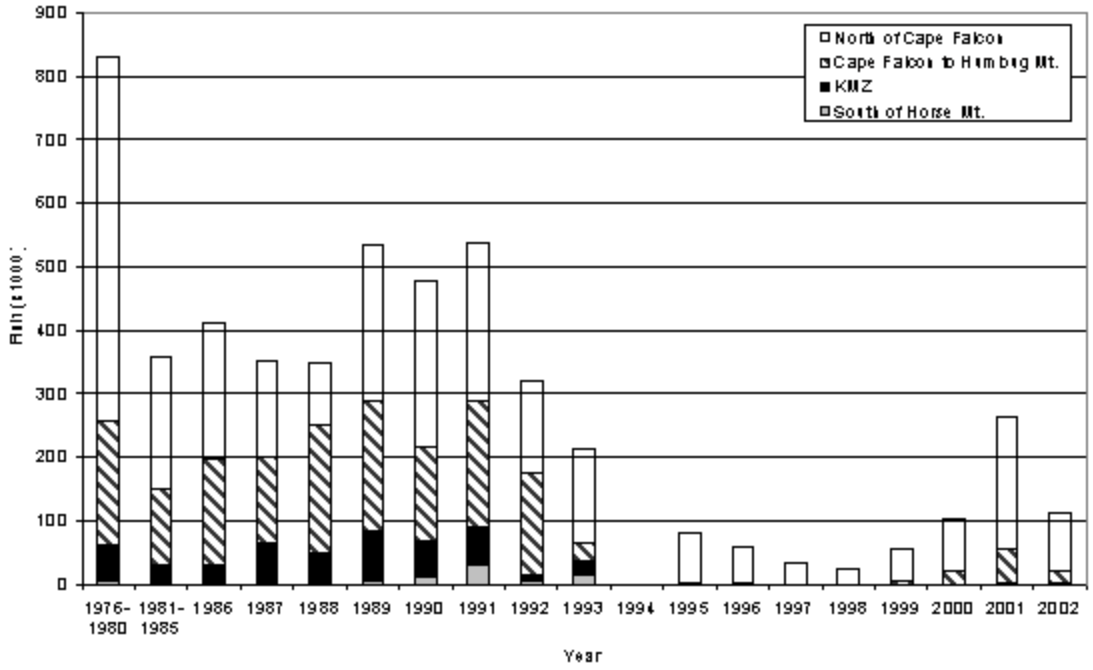

Figure 3-5b. Recreational coho landings by zone (source: Review of 2002 Ocean Salmon Fisheries).

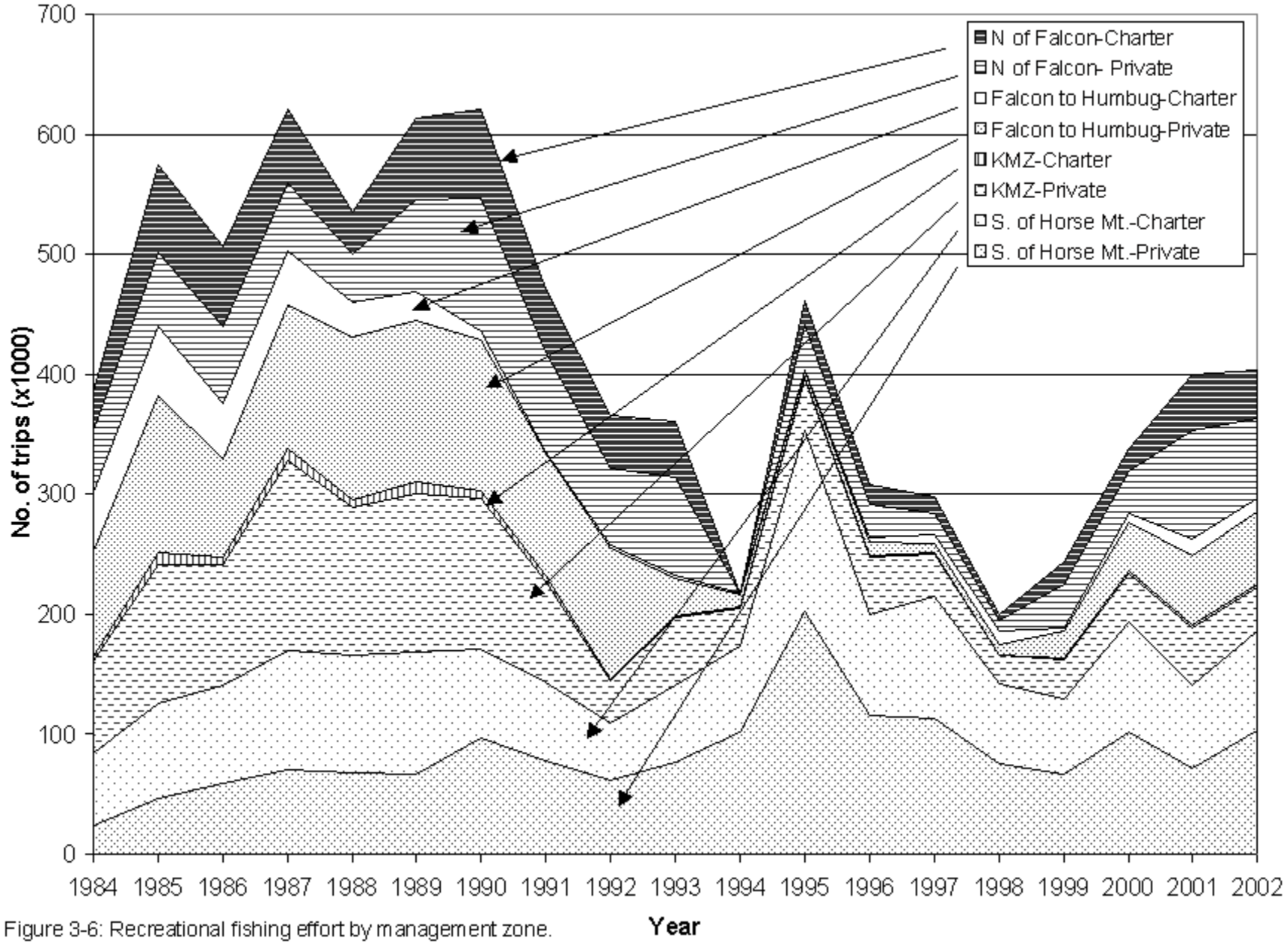

Figure 3-6: Recreational fishing effort by management zone.

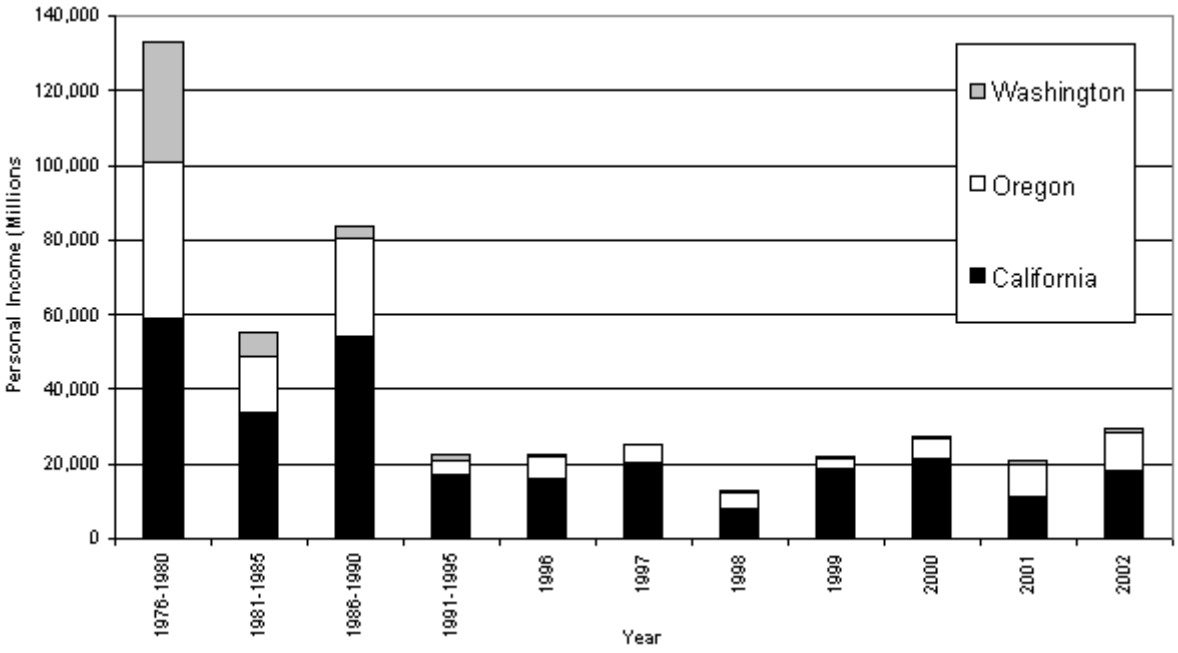

Figure 3-7a. Coastal community level personal income impacts associated with Council area commercial salmon fisheries.

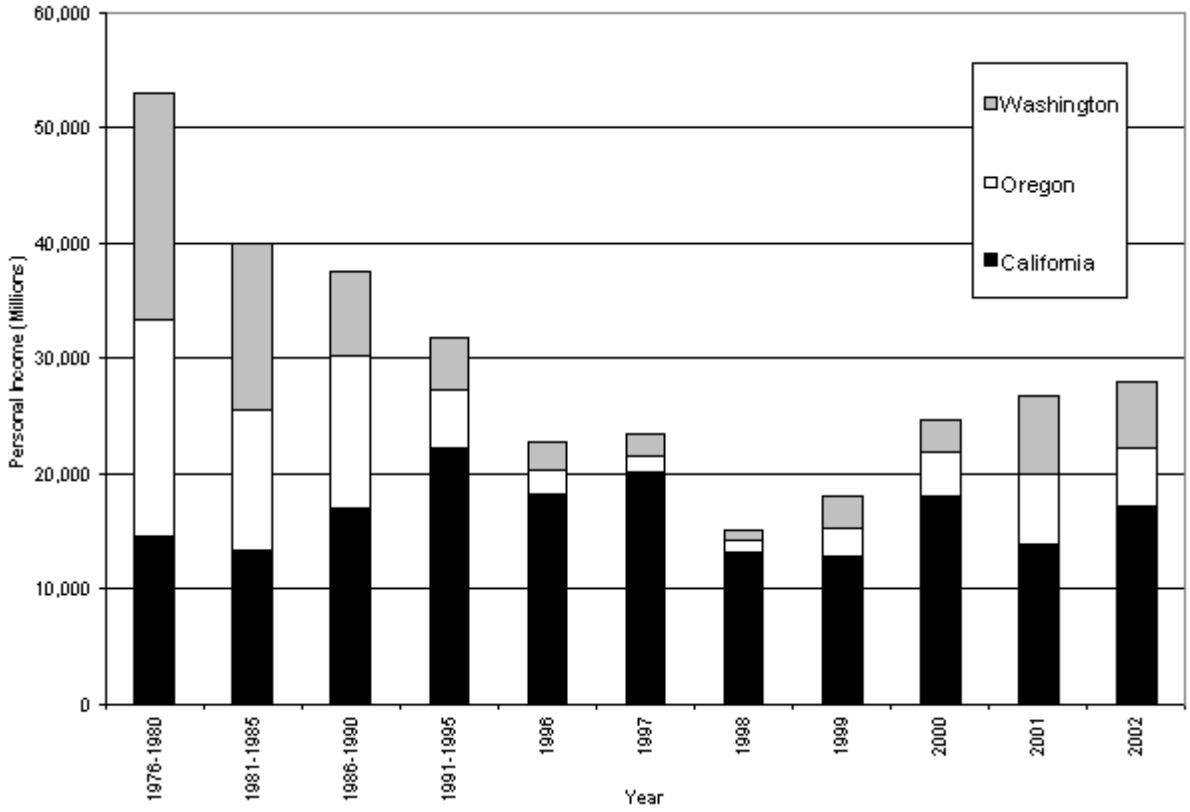

Figure 3-7b. Coastal community level personal income impacts associated with Council area recreational salmon fisheries.

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4 Environmental Consequences

The factors evaluated for significance in this EA are those listed in Section 6.02 of NAO 216-6, with specific application to these alternatives as detailed in Section 1.5 of this EA. Some of those factors have already been eliminated from further consideration in this analysis through the screening process applied in Section 1.5 of this EA, including essential fish habitat; public health and safety; and biodiversity and ecosystem function. Criteria for evaluating significance of the remaining factors are described in Section 1.5 of this EA.

For purpose of analysis, alternatives are compared to the 2002 fishery as a baseline. Two views of the 2002 fishery are presented, one is the preseason estimates of expected 2002 harvest and impacts (projected) and the other is the postseason estimate of 2002 harvest and impacts (actual). The 2002 projected impacts provide a relevant comparison of the modeled fisheries on which the Council based their decisions. These comparisons are most appropriate for biological factors such as conservation objectives. Actual 2002 impacts provide a more appropriate context for the likely economic impacts of 2003 fisheries, since 2003 projections are based primarily on actual 2002 impacts. Figures 4-1 and 4-2 display the projected total fishing mortality[5/] of each option. In the annual season-setting process and in this EA, this combined mortality is referred to as the impact of management measures. Tables 4-1a through 4-1c compare projected impacts (harvest plus bycatch) of the preferred alternative, other alternatives considered, and 2002 projections.[6/] Table 4-1c summarizes the distribution of impacts by species and fishery sector for each option. Table 4-1d compares projected escapement, harvest rates, and allocations, collectively referred to as conservation objectives associated with the various alternatives. (The 2002 values in the tables and figures are projected harvest impacts, taken from the 2002 Preseason Report III. Actual harvest impacts are different.)

4.1 Impacts of the Preferred Alternative

4.1.1 Salmon Fishery Management Unit Stocks

Overall, comparing the projections of the preferred alternative for 2003 management measures to a baseline composed of actual 2002 landings for all ocean fisheries Council area-wide, fewer chinook landings (1,037,000 fish in 2003 versus 1,082,800 fish in 2002) and greater coho landings (478,000 fish in 2003 versus 130,000 fish in 2002) are expected in 2003.

Differences in the relative and absolute distribution of impacts between areas and commercial versus recreational fisheries can be observed in Tables 4-1a through 4-1c. Council area-wide, more impacts occur from commercial fishing than recreational fishing under the preferred alternative. This results from the combination of relatively high chinook abundance in areas south of Cape Falcon where commercial fisheries typically dominate the landings, and the allocation schedules in the Salmon FMP for areas north of Cape Falcon that emphasize chinook for commercial fisheries and coho for recreational fisheries.

The distribution of chinook impacts under the preferred alternative differs from the range of options considered by the Council in a few respects. Non-Indian commercial impacts are higher in the north of Cape Falcon area and lower in the KMZ. This is the result of reducing the commercial quotas in the Oregon portion of the KMZ to compensate for larger than expected harvest in Oregon fisheries during the fall of 2002. Recreational impacts on both chinook and coho are higher in areas north of Cape Falcon in comparison to the other options. Commercial and recreational fishery impacts in other areas fall within the range of the other options considered.

The long-term impacts of the alternatives considered vary mainly in terms of their effect on spawning escapement. If inside harvest is adjusted such that total spawning escapement for a particular stock is the

5/ The values in these charts include both catch and bycatch mortality, as given in Preseason Report II, Table 6 and Preseason Report III, Table 6.

6/ The 2002 projected impacts are not equivalent to the no action alternative because they are projected on 2002 stock abundances rather than 2003 abundance.

same among the alternatives, then higher or lower ocean harvest levels have no long-term impact on that particular stock. However, if there is no inside fishery to adjust, or the magnitude of adjustment is not sufficient to yield a neutral effect on spawning escapement among the options, then there may be differing long-term effects among the options.

The direction of the long-term effect of different spawner escapement levels depends on the size of the escapement relative to the real MSY harvest level. If the number of spawners exceeds or is less than the real MSY spawner escapement level, adult recruitment will be less than would be expected at an MSY escapement, assuming a standard Ricker curve spawner-recruit relationship. Because management is inherently imprecise and the spawner escapement level that will produce MSY is uncertain, optimum escapement levels are not always reached. Our understanding of the relationship between salmon stock MSYs and conditions in the biophysical environment, combined with the difficulty in predicting both short- and long-term changes in the biophysical environment, makes it impossible to adjust the estimated MSY spawner escapement level in response to conditions present in a particular year. Spawner escapement goals are often set as proxies for MSY and are generally fixed targets or harvest rates. They are best estimates of the average MSY spawner escapement levels. Since environmental conditions vary from year to year, real MSY spawning escapement levels vary from these fixed proxies.

The Salmon FMP is structured such that in setting annual management measures, most stocks exceed their conservation objectives, while one or a few stocks constrain harvest because they approach their conservation objectives, without exceeding them. In theory then, most stocks experience escapement above the average MSY level (or other criteria) set as their conservation objective, while only the constraining stocks experience optimal escapement levels. In practice however, some stocks have harvest-rate-based conservation objectives that allow some harvest impacts when escapement is projected to be at less than optimal levels. Target species are generally not constraining stocks, so surplus escapement is generally expected. This may result in some density-dependant effects that could reduce future production, but may also contribute to greater ecosystem productivity that could increase future production.

All Salmon FMU stocks meet their conservation objectives under this alternative (Table 4-1d). Therefore, the effects of this alternative on Salmon FMU stocks are considered not to be significant based on the criteria established in Section 1.5 of this EA for meeting the significance test in NOAA NAO 216-6 Section 6.02 for target species.

4.1.2 Non-target Species

As discussed in Section 3.1.2, impacts of the alternatives are related both to the changes in the amount of groundfish caught in the ocean salmon fishery and how this would interact with the trip limit regime governing this fishery and other open access groundfish fisheries. No analysis is available to project groundfish landings based on management measures contained in the preferred alternative. But in very general terms it is likely that changes in salmon fishing mortality and incidental catches correlate (assuming a rough correlation between salmon fishing mortality and fishing effort). In comparison to the 2002 baselines, the preferred alternative, both recreational and commercial chinook fishing mortality is likely to about the same as in 2002. (Council-area wide, 2003 projections fall between 2002 preseason projections and postseason estimates.) In comparison to the other management options however, projected commercial and recreational chinook mortality is slightly greater than under the other options considered for 2003. Because chinook salmon typically occur at greater depths than coho, rockfish incidental catch is more likely when targeting chinook. Therefore, the preferred alternative is likely to result in about the same level of rockfish catches as occurred in 2002 but slightly greater catches than and Options II and III. Projected 2003 coho catches are substantially greater than the 2002 baselines (preseason projections and postseason estimates). Although rockfish are less commonly caught when targeting coho this opportunity could increase total fishing effort, particularly among recreational fishers who more commonly target coho salmon. However, recreational bag limits (and in California, seasons) have been put in place for overfished rockfish under the Groundfish FMP. This discourages targeting rockfish during a recreational trip (once the bag limit is reached). In addition changes in CPUE for both chinook and coho could affect commercial and recreational fishing strategy, potentially reducing incidental rockfish catches. For example, recreational fishermen reach their bag limits more quickly,

reducing incidental catch opportunity. If commercial fishermen target rockfish to some extent when salmon CPUE is low, increased salmon catch rates may modify this behavior.

For the above reasons, it is difficult to predict the effect of the preferred alternative (and the other alternatives) on groundfish catches. But assuming the correlation between salmon and groundfish harvests, impacts can be generally assessed. On the recreational side of the salmon fishery, harvests are expected to increase for areas south of Cape Falcon under the preferred alternative, mainly based on the increased opportunity for coho. In the area north of Cape Falcon, however, the elimination of the May-June chinook directed recreational fishery will substantially reduce opportunity to take groundfish species, especially since that time frame coincides with recreational Pacific halibut openings in that area. Halibut fisheries are more prone to incidental catch of rockfish and lingcod, so combination salmon/halibut trips probably account for a relatively larger impact to groundfish species than salmon only trips. This may result in a slight decrease in groundfish bycatch rates. On the commercial side of the fishery, 2003 catches, given the commercial preference for targeting chinook, are likely to be about the same as in 2002. Incidental harvest groundfish is thus likely to be at about the same level or slightly lower. Any unexpected expansion in incidental groundfish harvest would be taken into account in management of the groundfish open access fishery and appropriate inseason adjustments made to groundfish regulations (e.g. season closures or reduced landing limits).

The likelihood of similar or reduced groundfish landings compared to 2002 under this alternative meet the criteria for non- significance established in Section 1.5 of this EA for meeting the requirements significance test in NOAA NAO 216-6 Section 6.02 regarding impacts to non-target species.

4.1.3 ESA-listed Salmon

Appendix A to Preseason Report III evaluates Council-managed fishery impacts on ESA-listed salmon. In addition, Table 4-1d compares the preferred alternative to conservation objectives for Salmon FMU stocks, including consultation standards applicable to ESA-listed stocks. It can be seen that all stocks will achieve their objective under the preferred alternative. For chinook these include Coweeman tules, which are a component of the Lower Columbia River natural tule stock. Other listed chinook stocks impacted in Council area fisheries, all of which achieve NMFS ESA consultation standards, are the California Coastal, Lower Columbia River wild (Lewis River), and Snake River fall runs, and Sacramento winter runs. Federal-ESA listed coho stocks include OCN and northern California (a combination of SONCC and central California coastal [CCC] ESUs). OCN and Rogue Klamath (R/K) hatchery (surrogate for SONCC coho) stocks are usually important in determining the impacts of management options because their status tends to act as a constraint to allowing more harvest of healthier target stocks. Preseason Report III Table 7 breaks down the total exploitation rate by management area for OCN and R/K stocks. The preferred alternative meets the conservation objective for OCN, SONCC, and CCC coho (Table 4-1d).

The long-term effects of different spawning escapement levels on ESA listed salmon species or other constraining stocks resulting from this alternative are likely to include reduced juvenile production and ecosystem productivity. The level of production associated with escapement expected under this alternative is not expected to substantially affect the recovery of depressed stocks or affect the intrinsic productivity of the stocks.

All ESA listed salmon stocks meet NMFS ESA consultation standards under this alternative. Therefore, the effects of this alternative on ESA listed salmon stocks are considered not significant based on the criteria established in Section 1.5 of this EA for meeting the significance test in NOAA NAO 216-6 Section 6.02.

4.1.4 Socioeconomic Impacts

Tables 4-2a and 4-2b present information shown in Tables 8 and 9 in Preseason Report II and Tables 9 and 10 in Preseason Report III, listing socioeconomic impacts in dollar terms. For the commercial fishery these are expressed as ex-vessel value. For the recreational fishery the tables show angler trips and local community income impacts associated with the recreational fishery. Short-term economic effects in the ocean fishery generally correlate with the harvest impacts discussed above. Council area-wide, under the preferred alternative, commercial fishery management regulations result in a projected 7% decrease in exvessel

revenue compared to the 2002 postseason baseline and 20% increase in recreational fishery impacts for the same comparison. Coastal community level personal income impacts under this alternative are projected to be 33.6 million from recreational fisheries and $28.8 million from commercial fisheries, for a total of $62.4 million (Table 2-1). This total is slightly less than the 2002 level of $68.5 million, but greater than the recent year low of $27.8 million in 1998 (Figure 3-7).

This alternative adheres to the Salmon FMP allocation provisions for sharing of chinook and coho total allowable catch between recreational and commercial fisheries north of Cape Falcon, and for sharing the recreational coho allocation among port areas north of Cape Falcon. This alternative also meets the terms of the agreement reached in the *U.S. v. Oregon* forum for allocation of coho destined for areas above Bonneville Dam (Table 4-1d).

Ocean Commercial

As was the case in 2002, this year's management measures are expected to allow much greater harvest opportunity then has been the case in recent years, although revenues still will be down substantially from the 1976-1990 historical baseline. Comparing the preferred alternative to the 2002 postseason baseline (see Table 4-2a) all areas see increases in exvessel revenue except for the Oregon coast from Cape Falcon to Humbug Mountain, where revenue is estimated to decline by a substantial 56%. Catches of Klamath River stocks were higher than expected in fall 2002. These fish would otherwise have been available for 2003 fisheries. As a result, closures and size limit changes in this area are necessary to meet the Council's Salmon Advisory Subpanel's recommended sharing of Klamath River fall chinook ocean commercial harvest between the States of Oregon and California, affecting projected revenue in coastal Oregon. The revenue change is also magnified because of the higher 2002 catches. (The revenue projection at the start of the 2002 season for this area was only $2.3 million; if actual revenue was at this level there would be little change between 2002 and 2003.) If this area is excluded from the tally, revenues actually increased by 22% south of Cape Falcon. North of Cape Falcon an 11% revenue increase is estimated.

Council area-wide the preferred alternative ranks highest in revenue increases when compared to the other options. However, the Oregon coast and Northern California areas generally rank lower in this comparison because of 2002 catches of Klamath River stocks discussed above and allocation arrangements between Oregon and California. For this reason, in the KMZ the preferred alternative shows the smallest increase in projected revenues, in comparison to the other options. Northern California from Horse Mountain to Point Arena is third-ranked because of the need to meet allocation agreements with fewer available fish.

Ocean Recreational

Recreational fishing fares better than commercial fishing when looking at the change in community income impacts from 2002. Council area-wide, community income is slated to increase by 20%. This is still down, however, by 24% from the 1976-1990 historical baseline. Recreational fisheries are not subject to equivalent management measures compensating for high fall 2002 catches of Klamath River stocks. Because of normal abundance of Klamath River stocks and a marked increase in Sacramento River fish, the KMZ shows a 108% increase in income impacts, due to an uninterrupted recreational season, the first since 1991. The Oregon coast south of Cape Falcon benefits for the same reason, with community income estimated to increase by 57%.

In comparison to the other options, the preferred alternative shows the greatest community income level in all areas south of Cape Falcon, equivalent to Option I, the most "liberal" option. North of Cape Falcon the income estimate is slightly less than Option I but higher than the other two options.

Inside Harvest

Fish that are not taken in ocean harvest are either available for inside harvest or contribute to additional escapement. Thus total economic effects may vary less between the options than is indicated by the short-term effects on the ocean fisheries described above. Options that provide lower ocean harvest may provide more inside harvest (more commercial revenue or more angler trips) or higher inside CPUE (lower costs for

commercial fisheries, higher experience values for recreational fishers). Harvest forgone in ocean fisheries that is not taken in inside fisheries may have a long-term impact on future production. The direction of the impact will depend on the level of escapement compared to the MSY level of escapement and the nature of the spawner recruitment relationship.

The major allocations between inside and ocean harvest are set in processes coordinated with, but outside of the Council process. For the Columbia River, Washington coast and Puget Sound inside fisheries, ocean escapement (ocean harvest levels) are negotiated through the North of Falcon Forum. This forum involves state, tribal, and federal managers along with tribal, recreational and commercial harvesters of ocean and inside fisheries north of Cape Falcon. The other major ocean-inside allocation decisions occur with respect to the Klamath River chinook. These decisions are negotiated on a consensus basis through the Klamath Fishery Management Council. The preferred alternative meets the escapement obligations (ocean harvest level commitments) negotiated through these forums. These negotiation processes are designed to ensure that spawning escapement objectives are met while harvest is allocated between different users based on legal obligations and socioeconomic needs of the participants. Some additional detail on these negotiation processes are provided in Section 3.1 of Appendix B to the Salmon Management Plan. The impacts of the alternatives considered in this EA, with the exception of the no action alternative, are within the scope of those covered by the Supplemental Environmental Impact Statement done for Amendment 14 to the Salmon FMP.

Long-term socioeconomic and biological impacts are generally correlated. Changes in population productivity, due to spawning escapement levels and biophysical conditions, determine future harvest opportunity. By achieving established escapement goals, the preferred alternative should allow sustained harvests while allowing recovery of depressed and ESA-listed stocks.

Under this alternative, the coastal community level personal income impacts fall within the range observed in recent years, and conditions for all relevant allocation agreements are met (Table 4-1d). Therefore the effects of this alternative on the socioeconomic environment are considered not significant based on the criteria established in Section 1.5 of this EA for meeting the significance test in NOAA NAO 216-6 Section 6.02.

4.1.5 Reasons for Choosing the Preferred Alternative

The preferred alternative was chosen because it achieves the most favorable balance of biological, economic and social benefits in comparison to the other alternatives without a significant impact to the human environment. In summary, the preferred alternative:

- Will meet conservation goals for all Salmon FMU stocks and NMFS ESA consultation standards for ESA-listed stocks.
- Is unlikely to result in significant direct and indirect impacts on non-target species.
- Provides substantial harvest opportunity within management constraints intended to ensure sustained, long-term productivity of stocks.
- Distributes harvest opportunity among regions and sectors in a balanced fashion.

4.2 Impacts of the No Action Alternative

4.2.1 Salmon Fishery Management Unit Stocks

Preseason Report I evaluates the effect of applying previous years' regulations on projected 2003 coho stock abundance in terms of escapement and harvest rate objectives. The STT also analyzed the effects on chinook stock abundance subsequent to the April Council meeting (Table 4-1d). The results of that are summarized below.

Sacramento Fall Chinook: The Central Valley Index (CVI) is used to assess the abundance of combined Central Valley chinook stocks. The Sacramento River fall run comprises over 90% of Central Valley chinook stocks. The CVI harvest index, based on the CVI, is a ratio of harvested fish to the population (as measured by harvest and escapement). A repeat of 2002 regulations in 2003 would result in a CVI index value similar to the last five years. Because of the strength of this year's run, the calculated escapement would be 548,500 fish, substantially above the target range of 122,000-180,000 fish.

Klamath River Fall Chinook: The Klamath Ocean Harvest Model forecasts a spawning population of approximately 43,100 adults, of which 26,100 would be expected to spawn in natural areas. This is below the conservation objective minimum of 35,000 naturally spawning adults. An estimated range of 41,000 to 106,000 adults is required to maximize recruitment.

Oregon Coastal Chinook: The conservation objective of an aggregate 150,000 to 200,000 naturally spawning adults would be met if 2002 regulations were applied.

Columbia River Fall Chinook: All five major stock units (Lower River Wild, Upper River Brights, Mid-Columbia Brights, Spring Creek Hatchery and Lower River Hatchery) would exceed the conservation objectives set for them.

Washington Coast and Puget Sound Chinook: Council-managed fisheries have a minor impact on these stocks since they are generally distributed further north, in Canadian and Alaskan waters. For this reason, an evaluation of impacts was not made.

Oregon Production Index Coho: Ocean escapements into the Columbia River in 2003 would be sufficient to provide inside harvest and meet hatchery egg take goals.

Washington Coast and Puget Sound Coho: Under 2002 regulations, ocean escapements for Washington coast and Puget Sound natural coho stocks are expected to be at levels that would permit attainment of Salmon FMP escapement goals for all stocks. Impacts from inside (e.g., freshwater and Puget Sound) fisheries would ultimately determine levels of anticipated spawning escapements.

All Salmon FMU stocks meet their conservation objectives under this alternative except for the Klamath fall chinook natural spawning escapement (Table 4-1d). Therefore the effects of this alternative on Salmon FMU stocks are considered significant based on the criteria established in Section 1.5 of this EA for meeting the significance test in NOAA NAO 216-6 Section 6.02 for target species.

4.2.2 Non-target species

The rationale outlined in Section 4.1.2 applies to the other alternatives. The no action alternative would not necessarily result in the same level of incidental catch as occurred in 2002 because of changes in the abundance of non-target species stocks and the interaction between salmon CPUE and incidental species catch rates. This alternative allows more harvest opportunity for chinook and less for coho suggesting that it would result in higher rockfish catches in comparison to the other alternatives, however, there is insufficient information to quantify this difference. This alternative would likely result in similar landings of groundfish as occurred in 2002.

The likelihood of similar or reduced ground landings compared to 2002 under this alternative meet the criteria for non- significance established in Section 1.5 of this EA for meeting the requirements of NOAA NAO 216-6 Section 6.02 regarding non-target species.

4.2.3 ESA-listed Salmon

The expected impacts of 2002 regulations on ESA-listed chinook and coho stocks that Council area fisheries impact at greater than a 5% rate were modeled by the STT to provide a comparison of the biological consequences of the no action alternative. Consultation standards would be met for all of those stocks. Therefore, the effects of this alternative on ESA listed salmon stocks are considered not significant based on

the criteria established in Section 1.5 of this EA for meeting the significance test in NOAA NAO 216-6 Section 6.02.

4.2.4 Socioeconomic Impacts

Management measures are tailored to achieve the greatest fishing opportunity, and thus economic return, within the constraints of sustainable management. The 2003 chinook abundances range from higher than expected in 2002 in the south, to slightly lower in the north; and coho abundances coast-wide are higher than expected in 2002. The coast-wide economic consequences of applying the 2002 management regulations to 2003 stock abundances are likely negative in both the short-term and the long-term.

This alternative adheres to the Salmon FMP allocation provisions for sharing of chinook and coho total allowable catch between recreational and commercial fisheries north of Cape Falcon, and for sharing the recreational coho allocation among port areas north of Cape Falcon. This alternative also meets the terms of the agreement reached in the *U.S. v. Oregon* forum for allocation of coho destined for areas above Bonneville Dam (Table 4-1d).

Short-Term

Dollar values have not been assigned to the short-term economic effects of this option because it is not considered a viable option in that it would not meet the conservation objectives indicated in the purpose and need for these management actions (Section 1.2). This option would not be in the range of options discussed in the most recent EIS, prepared for Amendment 14 to the Salmon FMP, because it would not meet the natural spawner escapement objective for Klamath fall chinook.

The 2002 management measures would result in an under-harvest of coho salmon from the perspective of the ocean fishery. The preseason projected harvest for 2002 was 197,200 coho coast wide, for commercial and recreational fisheries combined, versus a projected range of 320,000 to 478,000 coho for 2003. The difference between these values does not reflect the actual under-harvest (since other variables in the models are different). But environmentally sustainable harvest would not be maximized unless inside fisheries are able to take the excess ocean escapement.

The situation for chinook is similar to coho south of Cape Falcon, and the opposite north of Cape Falcon. South of Cape Falcon preseason catch projections for the two years were 809,800 - 818,800 chinook in 2003 versus 834,700 fish estimated preseason for 2002. North of Cape Falcon however, abundance projections for some stocks are lower in 2003 than in 2002, which is reflected in preseason catch projections for the two years: 125,000 - 184,000 chinook in 2003 versus 210,000 fish estimated preseason for 2002. Thus, application of 2002 management measures would result in a substantial over-harvest providing greater short-term benefits to ocean fishers. Ocean escapement of chinook would be lower for those stocks present in lower abundance. If declines in ocean escapement cannot be compensated for with reduced inside harvest there would be long-term adverse effects from under escapement.

This overall picture is further complicated by the implicit and explicit allocation of fishing opportunity among sectors and areas that would result from a repeat of 2002 management measures. Over the short term, relative to what would be allowed under regulations tailored to 2003 abundances, less opportunity to harvest coho will adversely affect recreational fishers and fisheries north of Cape Falcon, which take a large share of the total coho harvest, more than commercial fishers and fisheries south of Cape Falcon. Greater opportunity to harvest chinook, relative to what would be allowed under regulations tailored to 2003 abundances, would tend to benefit commercial fisheries more and recreational fisheries south of Cape Falcon.

Long-Term

Effects on long-term harvest opportunities depend on the level of escapement relative to the real MSY escapement level given existing environmental conditions (the real MSY escapement is largely an unknown factor). Any substantial over- or under-escapement is likely to result in less future harvest opportunity than would otherwise have occurred. Assuming that management targets are, on average, at MSY levels, and a

standard Ricker type spawner-recruit relationship, the likelihood is that any deviation of spawning escapements below the management targets or above the level associated with maximum production will result in lower future production than would otherwise occur.

Although a specific analysis was not conducted, the coastal community level personal income impacts of this alternative likely fall within the range observed in recent years (Figure 3-7). This alternative also meets all relevant allocation agreements (Table 4-1d). Therefore the effects of this alternative on the socioeconomic environment are considered not significant based on the criteria established in Section 1.5 of this EA for meeting the significance test in NOAA NAO 216-6 Section 6.02.

4.2.5 Reasons for Rejecting the No Action Alternative

The no action alternative would not respond to changes in the status of chinook and coho stocks from 2002, and would consequently result in under or over-harvest of individual stocks. In particular, the natural spawning escapement objective for Klamath River fall chinook would not be met. This would have significant long-term biological and economic impacts because it would reduce population productivity, lowering potential yields over the long-term. The no action alternative would also have a short-term economic impact because it would reduce harvest opportunities on chinook south of Cape Falcon and coho coast-wide to a level lower than necessary given current biological constraints.

4.3 Impacts of Other Alternatives Considered

4.3.1 Salmon Fishery Management Unit Stocks

Anticipated impacts of the options developed during the March Council meeting are described on pages 8-10 in Preseason Report II. Table 4-1d compares key stock escapements, ocean exploitation rates, or other criteria to objectives. All of the options would meet conservation objectives for Salmon FMP stocks except that objectives would not be met under Options I for lower Columbia River natural tule chinook, Hood Canal natural coho, and interior Fraser (Thompson River) coho. In addition to conservation objectives, the allocation objective for upper Columbia River coho would not be not met under Options I and II.

Commercial chinook impacts would increase from a baseline of 2002 projected levels for all three options south of Point Arena, and decrease in all three options for all areas north of Point Arena, except treaty Indian impacts in Option I (Figure 4-1). Recreational chinook impacts would increase in all areas south of Cape Falcon for all three options and decrease north of Cape Falcon in all options (Figure 4-1). Coho impacts in 2003 for both commercial and recreational fisheries would increase in all areas under all three options compared to 2002 baseline (projected) levels (Figure 4-2).

In terms of overall impacts for both chinook and coho, Option I has the greatest impacts, Option II is intermediate, and Option III has the fewest impacts, although the distribution of impacts differs somewhat from the other options within the various zones. Chinook impacts in Option I commercial fisheries are lower south of Point Arena than in Options II and III. Chinook impacts in Option II are less than Options I and III in the KMZ. Similarly, coho impacts are greater in the commercial fishery in Option II south of Cape Falcon than in Options I and III.

The long-term effects of surplus escapement for salmon FMU stocks associated with these alternatives would result in some density dependant effects that could reduce future production, but may also contribute to greater ecosystem productivity that could increase future production. The long-term effects of under escapement, although partially compensated for by density dependant effects, would likely reduce future production and have negative impacts to ecosystem productivity.

All Salmon FMU stocks meet their conservation objectives under Options II and III, however under Option III lower Columbia River natural tule chinook, Hood Canal coho, and Interior Fraser coho conservation objectives would not be met (Table 4-1d). Therefore the effects of this Option I on Salmon FMU stocks is considered significant based on the criteria established in Section 1.5 of this EA for meeting the requirements of NOAA NAO 216-6 Section 6.02. The effects of Options II and III are not considered significant.

4.3.2 Non-target Species

Assuming an essentially linear correlation between salmon and non-target species impacts, as discussed previously, Options I, II and III could result in lower rockfish bycatch than the preferred alternative. Again, there is insufficient information to determine what these harvest levels might be. It is also possible that management measures in these options intended to reduce salmon catches could distort any correlation between salmon and rockfish catch rates by motivating more targeting on rockfish in response to the limits on salmon harvest opportunity. These alternatives would likely result in similar to lower landings of groundfish compared to the preferred alternative, and likely less than the no action alternative.

The likelihood of similar or reduced groundfish landings compared to 2002 under this alternative meet the criteria for non-significance based on the criteria established in Section 1.5 of this EA for meeting the significance test in NOAA NAO 216-6 Section 6.02 regarding non-target species.

4.3.3 ESA-listed Salmon Stocks

According to Preseason Report II (pages 8-10), consultation standards for most ESA listed salmon species were met by all the options, with the exception of Option I for threatened lower Columbia River natural tule chinook. Puget Sound chinook, however, did not have consultation standards in place at the time Preseason Report II was published, and the impacts of the three options could not be assessed. It should be noted that the analysis of impacts in Preseason Report II were based on preliminary estimates of inside fisheries, which were still under negotiation. The inside fisheries have significant impacts on these stocks, and it is likely that consultation standards and other management objectives could be met through those negotiations if one of these options were selected as a preferred alternative without modification. An analysis of impacts associated with ocean fisheries within the scope presented in the Salmon FMP is included in the NMFS biological opinions. (See section 6.2 for a list of relevant biological opinions.) NMFS ESA consultation standards are identified in Appendix A of Preseason Report III.

The long-term effects of different spawning escapement levels on ESA-listed salmon species or other constraining stocks resulting from Option I are likely to include reduced juvenile production and ecosystem productivity. If not effectively allocated to inside fisheries, reduced harvest impacts under Options II and III would allow higher spawning escapement and possibly increase production. However, the level of production associated with escapement expected under these options is not expected to substantially affect the recovery of depressed stocks or affect the intrinsic productivity of the stocks.

All ESA listed salmon stocks meet NMFS ESA consultation standards under this Options II and III. Therefore, the effects of these alternatives on ESA listed salmon stocks are considered not significant based on the criteria established in Section 1.5 of this EA for meeting the significance test in NOAA NAO 216-6 Section 6.02. Option I, however, does not meet the consultation standard for lower Columbia River natural tule chinook. Therefore Option I does not meet the criteria for non-significance.

4.3.4 Socioeconomic Impacts

Coastal community level personal income impacts from recreational fisheries are projected to range from $28.7 million for Option III to $29.2 million for Option II (Table 2-1). The range for commercial fisheries are projected to range from $29.4 million in Option III to $33.6 million in Option I. Total income impacts range from $58.1 million to $62.7 million, similar to the $62.4 million projected for the preferred alternative, and within the range of recent years (Figure 3-7).

These alternative adheres to the Salmon FMP allocation provisions for sharing of chinook and coho total allowable catch between recreational and commercial fisheries north of Cape Falcon, and for sharing the recreational coho allocation among port areas north of Cape Falcon. Options I and II, however, do not meet the terms of the agreement reached in the *U.S. v. Oregon* forum for allocation of coho destined for areas above Bonneville Dam (Table 4-1d).

Short Term

Tables 9 and 10 and Figures 1 and 2 in Preseason Report II show the short-term ocean area economic impacts of the other alternatives considered related to the 2002 baseline (actual) derived from postseason estimates. For the commercial fishery these are expressed as exvessel value and local community income impacts (in dollar terms). For the recreational fishery the tables show angler trips and, as with the commercial sector, local community income impacts. Short-term economic effects in the ocean fishery generally correlate with the harvest impacts discussed above. Referring to Preseason Report II, commercial fishers and those relying on commercial fisheries are expected to experience a slight decrease in economic activity in 2003, as compared to the 2002 postseason (actual) baseline, while recreational fishing and those relying on recreational fisheries are expected to experience an increase in activity. Examining commercial fishing by management area (Table 4-2a), most areas south of Cape Falcon would experience an increase in revenues relative to the 2002 postseason (actual) baseline, with the exception of the Central Oregon coast commercial fishery (Cape Falcon to Humbug Mountain). North of Cape Falcon, revenues would increase under Option I, remain about the same under Option II and decrease under Option III. However, Option I would not be expected to meet some of the NMFS ESA consultation standards or other management objectives. Recreational fishing shows across-the-board increases in economic effects when compared to the 2002 postseason (actual) baseline. Option I would produce the greatest increase in most areas (Table 4-2b).

Long Term

Long-term socioeconomic and biological impacts are generally correlated. Changes in population productivity, due to spawning escapement levels and biophysical conditions, determine future harvest opportunity. By achieving established escapement goals, the preferred alternative should allow sustained harvests while allowing recovery of depressed and ESA-listed stocks. Because Option I may not meet escapement objectives, it may have adverse effects on spawning escapement with long-term consequences that are outside the scope of the Amendment 14 SEIS.

Under these alternatives, the coastal community level personal income impacts fall within the range observed in recent years, however, Options I and II do not meet the conditions for the *U.S. v. Oregon* coho allocation agreement (Table 4-1d). Therefore, the effects of Options I and II on the socioeconomic environment are considered significant based on the criteria established in Section 1.5 of this EA for meeting the significance test in NOAA NAO 216-6 Section 6.02. The effects of Option II are not considered significant.

4.3.5 Reasons for Rejecting Other Alternatives Considered

Option I could have a significant biological impact because conservation objectives for lower Columbia River natural tule chinook as well as Hood Canal and Interior Fraser coho stocks would not be met. In addition, the allocation objective for upper Columbia coho was not met in Options I and II. While Option III was found to have no significant impacts, it was rejected because of the reduced economic benefits in comparison with the preferred alternative.

4.4 Cumulative Impacts

Cumulative effects are caused by the aggregate of past, present and reasonably foreseeable actions, including impacts outside the scope of the proposed action (in this case annual management measures). Two broad categories of cumulative impacts can be identified for salmon species that are affected by Council-managed ocean commercial and recreational fisheries. The first category includes other ocean fisheries, many of which are managed by the Council, and so-called inside fisheries prosecuted in internal waters (like Puget Sound) and in rivers as salmon migrate towards their spawning grounds. Fishing mortality also has some broader ecological effects since it removes salmon that might otherwise be consumed by other ecosystem components. The second category comprises human activities that affect the sustainability of salmon populations. Because salmon spend part of their life cycle in freshwater, they are more vulnerable to a broad range of human activities (since humans spend most of their time on land) that affect the quality of these freshwater environments. These effects are generally well known and diverse. They include physical

barriers to migration (dams), changes in water flow and temperature (often a secondary effect of dams or water diversion projects), and degradation of spawning environments due to increased silt in the water due to adjacent land use. A very large proportion of the long-term, and often permanent, declines in salmon stocks is attributable this class of impacts. (For a detailed summary of non-fishing impacts to salmon habitat see Section 3.2.5 of the EFH Appendix A to Amendment 14.)

Consideration of cumulative effects is intrinsic to fishery management. When developing management measures, fishery managers try to account for all sources of mortality in a given population and the productivity of that population. This accounting does not have to be explicit, in that total mortality is exactly partitioned among each cause, except that natural and fishing mortality are distinguished. The aggregation accounts for a wide variety of effects, including past fishing mortality. Future fishing mortality is not accounted for in population models, but it can be broadly anticipated based on limits set by the management regime. Other actions—that, for example, degrade habitat—are accounted for in estimates of natural mortality and population productivity. In the case of salmon, fishing mortality is reasonably accounted for because quotas or allocations to other fisheries are known or foreseeable. Natural mortality is estimated and accounts for all non-fishing impacts to a given population. By the same token, productivity estimates include reproductive success and recruitment to the adult, fishable population. This accounts for short and long-term changes to spawning habitat, among other things. Although salmon's anadromous life cycle is its "Achilles heel" in one sense (because it exposes key life stages to human-induced impacts) it makes the task of stock assessment much easier because reproductive success can be estimated with a fair degree of certainty. Marine survival is harder to measure. But taken together, as part of the stock assessment, these measures effectively account for cumulative effects to salmon targeted by the proposed action. However, the effect of fishing on the ecosystem, due to the shift in balance between fishing and natural mortality, is much harder to predict. Fish removed by fishermen are unavailable to other trophic levels, to be eaten by predators or recycled by decomposers for example. These effects cannot be readily assessed, but there is no indication that fishing mortality substantially contributes to ecosystem-wide effects.

Despite the effectiveness of these management models in accounting for cumulative impacts, uncertainty by itself can be considered an additional source of cumulative impacts. Although easier for salmon than other marine species, it is inherently difficult to precisely measure many population parameters. These multiple uncertainties have a compound effect, and in this sense uncertainty produces cumulative effects that must be accounted for in decision making. For example, drop-off mortality cannot be measured directly and must be estimated. Similarly, mortality from recreational fishing is, in many cases, difficult to estimate because it is hard to monitor fisheries with many thousands of participants fishing in the ocean, rivers and streams. The cumulative effect of error in parameter estimates ultimately determines managers' success in setting management targets that ensure sustained exploitation across all users. The discussion of abundance predictors and comparison of preseason predictions with post-season estimates, found in the Review of 2002 Ocean Salmon Fisheries, shows that predictions are generally accurate. In comparison to other fisheries, these cumulative errors have not detracted from management performance.

The alternatives do not differ greatly in the context of cumulative impacts since all other impacts besides those resulting from the proposed action, discussed here, apply equally to each of the alternatives. For this reason the direct impacts of the alternatives, in this case the level of fishing mortality that would result, correlates directly with cumulative impacts. As a result, alternatives that allow greater harvest (e.g., Option I in comparison to Option III) produce a greater cumulative impact.

4.5 Summary and Comparison of Impacts Between Alternatives

The preferred alternative would not have a significant impact on the environment because it meets the conservation objectives, allocation criteria, and other relevant objectives of the Salmon FMP; achieves applicable ESA consultation standards; and complies with obligations under the Pacific Salmon Treaty. Further, the impacts of this alternative were compared to criteria established for determination of significance based on NOAA NAO 216-6, section 6.02, and found to be not significant. The harvest impacts of the preferred alternative are greater than Options I, II, and III for chinook, but intermediate between Options I and II for coho. For the commercial fishery, short-term economic value for this alternative is greater than the Option I, II, and III alternatives. For the recreational fishery short-term economic value is the same as Option

I and greater than the other alternatives. The commercial fishery would likely experience a slight economic decrease relative to the 2002 postseason baseline, while the recreational fishery would likely to experience a substantial increase relative to this baseline.

The no action alternative would have a significant negative impact because it would not respond to changes in chinook and coho stock status, resulting in under or over-harvest of stocks. Re-application of 2002 management measures would increase impacts on some ESA-listed salmon and the objective for natural spawning Klamath River fall chinook would not be met. The short-term economic value for this option was not estimated because the alternative does not meet the purpose and need for action. Further, the impacts of this alternative were compared to criteria established for determination of significance based on NOAA NAO 216-6, section 6.02, and found to be significant.

Option I has the highest overall harvest impacts to both chinook and coho of the three options, but lower than the preferred alternative, but would not meet all conservation and management objectives. Short-term recreational economic value is highest among the other Options and the same as the preferred alternative, but commercial economic value for this option is intermediate between Option II and Option III. Further, the impacts of this alternative were compared to criteria established for determination of significance based on NOAA NAO 216-6, section 6.02, and found to be significant.

Option II is intermediate in terms of overall harvest impacts. The option would not meet the allocation objective for upper Columbia coho. The short-term commercial economic value of this option is likely greater than Option I and Option III, but less than the preferred alternative. The short-term recreational economic value of this option is intermediate between Option I and Option III. Further, the impacts of this alternative were compared to criteria established for determination of significance based on NOAA NAO 216-6, section 6.02, and found to be significant.

Option III has the lowest overall harvest impacts. It would also meet conservation and allocation objectives for all stocks. The short-term commercial and recreational economic value of this option is less than Option I, Option II, and the preferred alternative. Further, the impacts of this alternative were compared to criteria established for determination of significance based on NOAA NAO 216-6, section 6.02, and found to be not significant.

TABLE 4-1a: Chinook harvest impacts (catch and bycatch combined, thousands of fish) and percent distribution within each option. (Page 1 of 1)

	Troll						Recreational					
		2002 Baseline						2002 Baseline				
	Preferred	Preseason Projection	Postseason Estimate	Option I	Option II	Option III	Preferred	Preseason Projection	Postseason Estimate	Option I	Option II	Option III
					Thousands of Fish							
Treaty Indian	68.9	67.7	43.4	69.3	46.3	34.7						
N. of C. Falcon Non-Indian	88.9	103.4	102.3	83.0	82.9	68.2	70.2	75.8	75.8	67.3	65.8	58.0
C. Falcon to Humbug Mt.	135.4	155.4	315.7	139.7	135.4	134.0	30.4	15.0	38.1	30.4	28.6	26.0
KMZ	23.2	27.2	22.2	25.7	25.5	25.7	41.9	23.3	28.9	42.0	35.6	39.4
S. of Horse Mt.	506.1	449.3	414.5	493.6	511.1	511.8	164.3	145.3	181.3	167.3	167.3	167.3
Total	822.5	803.0	898.1	811.3	801.0	774.4	309.8	259.4	324.1	307.0	297.3	280.7
					Percent							
Treaty Indian	8.4%	8.4%	4.8%	8.5%	5.8%	4.5%						
N. of C. Falcon Non-Indian	10.8%	12.9%	11.4%	10.2%	10.4%	8.8%	22.7%	29.2%	23.4%	21.9%	22.1%	20.7%
C. Falcon to Humbug Mt.	16.2%	19.4%	35.2%	17.2%	16.9%	17.3%	9.8%	5.8%	11.8%	9.9%	9.6%	9.3%
KMZ	2.8%	3.4%	2.5%	3.2%	3.2%	3.3%	13.5%	9.0%	8.9%	13.7%	12.0%	14.0%
S. of Horse Mt	61.5%	56.0%	46.2%	60.8%	63.8%	66.1%	53.0%	56.0%	55.9%	54.5%	56.3%	59.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 4-1b: Coho harvest impacts (catch and bycatch combined, thousands of fish) and percent distribution within each option. (Page 1 of 1)

	Troll						Recreational					
		2002 Baseline						2002 Baseline				
	Preferred	Preseason Projection	Postseason Estimate	Option I	Option II	Option III	Preferred	Preseason Projection	Postseason Estimate	Option I	Option II	Option III
					Thousands of Fish							
Treaty Indian	95.3	63.2	19.0	95.4	79.3	63.4						
N. of C. Falcon Non-Indian	101.6	26.2	22.3	105.0	85.8	68.2	256.4	132.9	107.2	255.9	212.7	169.8
S. of C. Falcon.	16.7	8.9	8.9	16.2	16.9	16.2	110.7	32.8	139.0	115.0	99.3	80.8
Total	213.6	98.3	50.2	216.6	182.0	147.8	367.1	165.7	246.2	370.9	312.0	250.6
					Percent							
Treaty Indian	44.6%	64.3%	37.8%	44.0%	43.6%	42.9%						
N. of C. Falcon Non-Indian	47.6%	26.7%	44.4%	48.5%	47.1%	46.1%	69.8%	80.2%	43.5%	69.0%	68.2%	67.8%
S. of C. Falcon	7.8%	9.1%	17.7%	7.5%	9.3%	11.0%	30.2%	19.8%	56.5%	31.0%	31.8%	32.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 4-1c: Summary of the distribution of impacts within each alternative (thousands of fish and percent of total). (Page 1 of 1)

	Commercial	Recreational	Total
Preferred Alternative			
Chinook	822.5 (48.0%)	309.8 (18.0%)	1,132.3 (66.0%)
Coho	213.6 (12.5%)	367.1 (21.5%)	580.7 (34.0%)
Total	1,036.1 (60.5%)	676.9 (39.5%)	1,713.0 (100.0%)
2002 Baseline (preseason projection)			
Chinook	803.0 (60.5%)	259.4 (19.6%)	1,062.4 (80.1%)
Coho	98.3 (7.4%)	165.9 (12.5%)	264.2 (19.9%)
Total	901.3 (67.9%)	425.3 (32.1%)	1,326.6 (100.0%)
2002 Baseline (postseason estimate)			
Chinook	898.1 (63.6%)	324.1 (23.0%)	122.2 (86.6%)
Coho	50.2 (3.6%)	139.0 (9.8%)	189.2 (13.4%)
Total	948.3 (67.2%)	463.1 (32.8%)	1,411.4 (100.0%)
Option I			
Chinook	811.3 (47.6%)	307.0 (18.0%)	1,118.3 (65.6%)
Coho	216.6 (12.7%)	370.9 (21.7%)	587.5 (34.4%)
Total	1,027.9 (60.3%)	677.9 (39.7%)	1,705.8 (100.0%)
Option II			
Chinook	801.0 (50.3%)	297.3 (18.7%)	1,098.3 (69.0%)
Coho	182.0 (11.4%)	312.0 (19.6%)	494.0 (31.0%)
Total	983.0 (61.7%)	609.3 (38.3%)	1,592. (100.0%)
Option III			
Chinook	774.4 (53.3%)	280.7 (19.3%)	1,055.1 (72.6%)
Coho	147.8 (10.2%)	250.6 (17.2%)	398.4 (27.4%)
Total	922.2 (63.4%)	531.3 (36.6%)	1,453.5 (100.0%)

TABLE 4-1d. Projected **key stock escapements** (thousands of fish) or management criteria for 2003 ocean salmon fishery alternatives.[a/] (Page 1 of 3)

Key Stock/Criteria	Projected Ocean Escapement[b/] or Other Criteria (Council Area Fisheries)					Spawner Objective or Other Comparative Standard as Noted	
CHINOOK							
	Preferred	No Action	Option I	Option II	Option III		
Columbia Upriver Brights	253.2	281.7	273.4	274.1	274.1	57.3	Minimum ocean escapement to attain 43.5 adults over McNary Dam, with normal distribution and no mainstem harvest.
Mid-Columbia Brights	93.6	104.2	101.1	101.4	101.4	16.6	Minimum ocean escapement to attain 5.75 adults for Bonneville Hatchery and 2.0 for Little White Salmon Hatchery egg-take, assuming average conversion and no mainstem harvest.
Columbia Lower River Hatchery Tules	116.9	118.2	120.2	123.1	125.8	23.4	Minimum ocean escapement to attain 14.3 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest.
Columbia Lower River Natural Tules	47%	49%	51%	49%	48%	≤49%	ESA guidance met by a total adult equivalent fishery exploitation rate on Coweeman tules (NMFS ESA consultation standard).
Columbia Lower River Wild (threatened)	23.4	24.7	24.3[c/]	24.4[c/]	24.3[c/]	5.7	MSY spawner goal for North Lewis River fall chinook (NMFS ESA consultation standard).
Spring Creek Hatchery Tules	101.9	99.7	102.6	106.9	112.4	11.1	Minimum ocean escapement to attain 7.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Snake River Fall (threatened) SRFI	67%	65%	64%	61%	56%	≤70.0%	Of 1988-1993 base period exploitation rate for all ocean fisheries (NMFS ESA consultation standard).
Klamath River Fall	35.0	26.1	35.0	35.0	35.0	35.0	Minimum number of adult spawners to natural spawning areas.
Federally recognized tribal harvest	50%	50%	50%	50%	50%	50.0%	Equals 41.4, 41.3, and 41.3 (thousand) adult fish for Yurok and Hoopa tribal fisheries
Age 4 ocean harvest rate	16.0%	14.8%	15.9%	16.0%	15.9%	≤16.0%	NMFS ESA consultation standard for threatened California coastal chinook.
KMZ sport fishery allocation	14.8%	10.2%	14.9%	12.9%	11.2%	-	None specified for 2003.
CA/OR troll fishery allocation	51%/49%	43%/57%	48%/52%	51%/49%	51%/49%	-	None specified for 2003.
River recreational fishery allocation	26.1%	40.6%	26.7%	26.4%	27.3%	≥15.0%	Agreed to by California Fish and Game Commission; Equals 11.1, 10.9, and 11.3 (thousand) adult fish for recreational inriver fisheries.
Box for printing page numbers on landscape pages is in this document (see reveal codes)Sacramento River Winter (endangered)	Yes	Yes	Yes	Yes	Yes		Duration and timing of commercial and recreational seasons south of Point Arena do not differ substantially relative to those of 2000 and 2001 (NMFS ESA consultation standard).
Sacramento River Fall	517.0	518.4	517.0	517.0	517.0	122.0-180.0	Sacramento River fall natural and hatchery adult spawners.

TABLE 4-1d. Projected **key stock escapements** (thousands of fish) or management criteria for 2003 ocean salmon fishery alternatives.[a/] (Page 2 of 3)

Key Stock/Criteria	Projected Ocean Escapement[b/] or Other Criteria (Council Area Fisheries)					Spawner Objective or Other Comparative Standard as Noted	
COHO							
	Preferred	No Action	Option I	Option II	Option III		
Interior Fraser (Thompson River)	8.3%	7.5%	10.1%(5.4%)	9.3%(4.5%)	8.5%(3.7%)	≤10%	Total exploitation rate for all US fisheries south of the US/Canada border.[d/]
Skagit	37%(5.4%) 97.9	34%(4.0%) 99.5	36%(5.8%) 96.7	35%(3.9%) 97.7	35%(2.9%) 98.7	≤60% 30.0	2003 total exploitation rate ceiling based on 2001management plan[d/] MSP level of adult spawners Identified in FMP.
Stillaguamish	37%(7.8%) 27.7	29%(5.0%) 30.0	36%(8.2%) 28.1	35%(6.7%) 28.6	34%(5.4%) 29.0	≤50% 17.0	2003 total exploitation rate ceiling based on 2001management plan[d/] MSP level of adult spawners Identified in FMP.
Snohomish	33%(7.8%) 147.6	27%(5.0%) 157.4	34%(8.2%) 145.5	33%(6.7%) 148.0	31%(5.4%) 150.3	≤60% 70.0	2003 total exploitation rate ceiling based on 2001management plan[d/] MSP level of adult spawners Identified in FMP.
Hood Canal	41%(5.9%) 25.8	41%(3.9%) 34.9	47%(6.5%) 25.3	42%(5.3%) 25.7	41%(4.2%) 26.1	≤45% 21.5	2003 total exploitation rate ceiling based on 2001management plan[d/] MSP level of adult spawners Identified in FMP.
Strait of Juan de Fuca	14%(5.8%) 18.0	12%(3.0%) 27.2	15%(6.1%) 18.0	14%(5.1%) 18.2	13%(4.1%) 18.3	≤40% 12.8	2003 total exploitation rate ceiling based on 2001management plan[d/] MSP level of adult spawners Identified in FMP.
COASTAL NATURAL:							
Quillayute Fall	21.2	22.2	21.1	21.5	22.0	6.3-15.8	MSY adult spawner range (not annual target). Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Hoh	10.4	11.0	10.3	10.7	10.9	2.0-5.0	MSY adult spawner range (not annual target). Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Queets Wild	19.6	20.9	19.5	20.1	20.6	5.8-14.5	MSY adult spawner range (not annual target). Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Queets Supplemental	1.1	1.1	1.1	1.1	1.1	-	
Grays Harbor	52.3	54.7	52.0	52.9	53.7	35.4	MSP level of adult spawners. Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Oregon Coastal Natural (threatened)	14.4%	7.2%	14.5%	13.2%	11.5%	≤15.0%	Marine and freshwater fishery exploitation rate.
Northern California (threatened)	9.6%	5.4%	9.1%	8.7%	7.8%	≤13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).
COLUMBIA RIVER:							
Upper Columbia	52%	N/A	43%	49%	54%	50%	Minimum percentage of the run to Bonneville Dam.
Columbia River Hatchery Early	246.4	355.5	221.0	242.9	266.0	38.7	Minimum ocean escapement to attain hatchery egg-take goal of 19.6 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Hatchery Late	145.9	258.9	132.3	162.1	190.3	19.4	Minimum ocean escapement to attain hatchery egg-take goal of 15.2 late adult coho, with average conversion and no mainstem or tributary fisheries.

TABLE 4-1d. Projected **key stock escapements** (thousands of fish) or management criteria for 2003 ocean salmon fishery alternatives.[e/] (Page 3 of 3)

a/ Projections in the table assume preseason estimates of Canadian and Alaskan fisheries impacts.

b/ Ocean escapement is the number of salmon escaping ocean fisheries and entering freshwater with the following clarifications. Ocean escapement for Puget Sound stocks is the estimated number of salmon entering Area 4B that are available to U.S. net fisheries in Puget Sound and spawner escapement after impacts from the Canadian, U.S. ocean, and Puget Sound troll and recreational fisheries have been deducted. Numbers in parentheses represent Council area exploitation rates for Puget sound coho stocks. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. Exploitation rates for OCN coho include impacts of freshwater fisheries.

c/ includes minor contributions from East Fork Lewis River and Sandy River.

d/ Annual management objectives may be different than FMP goals, and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders. Total exploitation rate includes Alaskan, Canadian, Council area, Puget Sound and freshwater fisheries, and is calculated as total fishing mortality divided by total fishing mortality plus spawning escapement. These total exploitation rates reflect the initial base package for inside fisheries developed by state and tribal comanagers. It is anticipated that total exploitation rates will be adjusted by state and tribal comanagers during the preseason planning process to comply with stock specific exploitation rate constraints.

e/ Projections in the table assume preseason estimates of Canadian and Alaskan fisheries impacts.

TABLE4-2a. Preliminary projections of exvessel value for non-Indian commercial troll regulatory options. (Page 1 of 1)

Management Area	Option	Exvessel Value (thousands of dollars)[a/] Projected 2003[b/]	2002 Actual	Percent Change from 2002	1976-1990 Average[c/]	Percent Change from 1976-1990 Average
North of Cape Falcon						
	I	1,368	1,228	11%	5,634	-76%
	II	1,220		-1%		-78%
	III	980		-20%		-83%
	Pref	1,368		11%		-76%
Cape Falcon to Humbug Mt.	I	2,151	4,837	-56%	14,997	-86%
	II	2,044		-58%		-86%
	III	2,010		-58%		-87%
	Pref	2,044		-58%		-86%
Humbug Mt. to Horse Mt.	I	493	421	17%	7,542	-93%
	II	484		15%		-94%
	III	493		17%		-93%
	Pref	444		6%		-94%
Horse Mt. to Pt. Arena	I	1,331	1,388	-4%	6,998	-81%
	II	1,672		20%		-76%
	III	1,687		22%		-76%
	Pref	1,576		14%		-77%
South of Pt. Arena	I	7,492	5,975	25%	14,265	-47%
	II	7,492		25%		-47%
	III	7,492		25%		-47%
	Pref	7,492		25%		-47%
Total South of Cape Falcon	I	11,467	12,621	-9%	43,802	-74%
	II	11,693		-7%		-73%
	III	11,683		-7%		-73%
	Pref	11,557		-8%		-74%
West Coast Total	I	12,835	13,849	-7%	49,436	-74%
	II	12,913		-7%		-74%
	III	12,663		-9%		-74%
	Pref	12,925		-7%		-74%

a/ Exvessel values are not comparable to the community income impacts shown in Table 10.
b/ Dollar value estimates are based on expected catches in the Council management area, 2002 exvessel prices and 2002 average weight per fish.
c/ Adjusted to 2002 dollars.

TABLE 4-2b. Preliminary projections of angler trips and coastal community income generated for recreational ocean salmon fishery regulatory options compared to 2002 and the 1976-1990 average (inflation adjusted). (Page 1 of 1)

Management Area	Option	Angler Trips (thousands)			Coastal Community Income Impacts (thousands of dollars)[a/]			Percent Change in Income Impacts	
		Estimates Based on the Options	2002 Actual	1976-1990 Avg.	Estimates Based on the Options	2002 Actual	1976-1990 Avg.	Compared to 2002 Actual	Compared to 1976-1990 Avg.
North of Cape Falcon	I	128	106	271	7,817	6,462	15,787	21%	-50%
	II	117			7,129			10%	-55%
	III	99			6,034			-7%	-62%
	Pref	128			7,806			21%	-51%
Cape Falcon to Humbug Mt.	I	113	72	184	5,815	3,701	9,899	57%	-41%
	II	93			4,798			30%	-52%
	III	86			4,416			19%	-55%
	Pref	113			5,815			57%	-41%
Humbug Mt. to Horse Mt.	I	81	39	117	3,854	1,851	5,755	108%	-33%
	II	70			3,305			79%	-43%
	III	58			2,760			49%	-52%
	Pref	81			3,854			108%	-33%
Horse Mt. to Pt. Arena	I	34	32	12	2,393	2,195	770	9%	211%
	II	34			2,393			9%	211%
	III	34			2,393			9%	211%
	Pref	34			2,195			9%	211%
South of Pt. Arena	I	154	154	116	13,759	13,759	12,292	0%	12%
	II	154			13,759			0%	12%
	III	154			13,759			0%	12%
	Pref	154			13,759			0%	12%
Total South of Cape Falcon	I	383	297	429	25,820	21,506	28,716	20%	-10%
	II	352			24,254			13%	-16%
	III	333			23,328			8%	-19%
	Pref	383			25,820			20%	-10%
West Coast	I	511	403	701	33,637	27,967	44,503	20%	-24%
	II	469			31,383			12%	-29%
	III	432			29,362			5%	-34%
	Pref	511			33,627			20%	-24%

a/ Income impacts are totals for individual communities. Impacts between communities in the management area have not been counted. Income impacts are not comparable to the exvessel values shown in Table 4-2a. All dollar values are adjusted to 2002 real values.

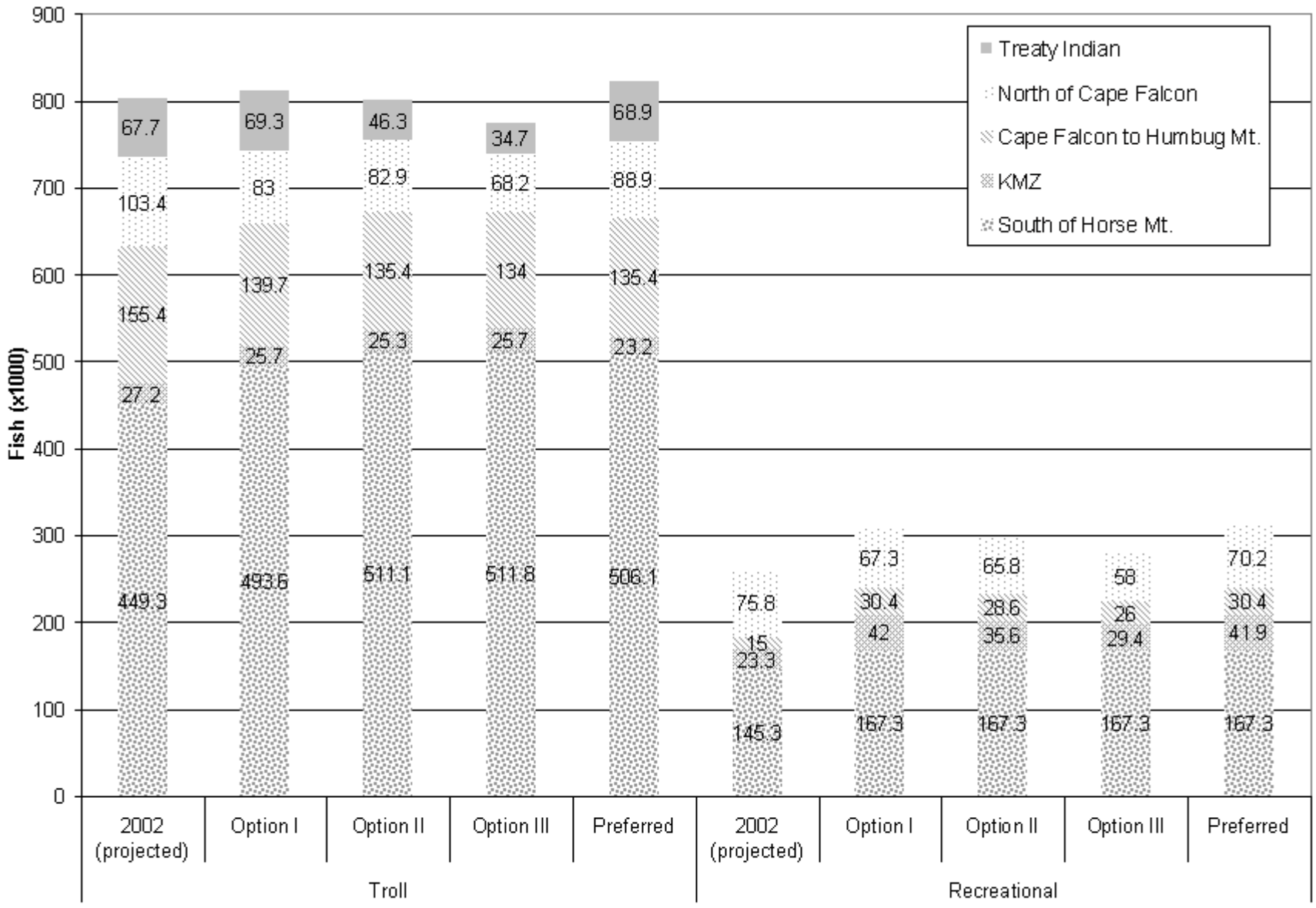

Figure 4-1: Chinook harvest impacts (landed catch plus bycatch mortality).

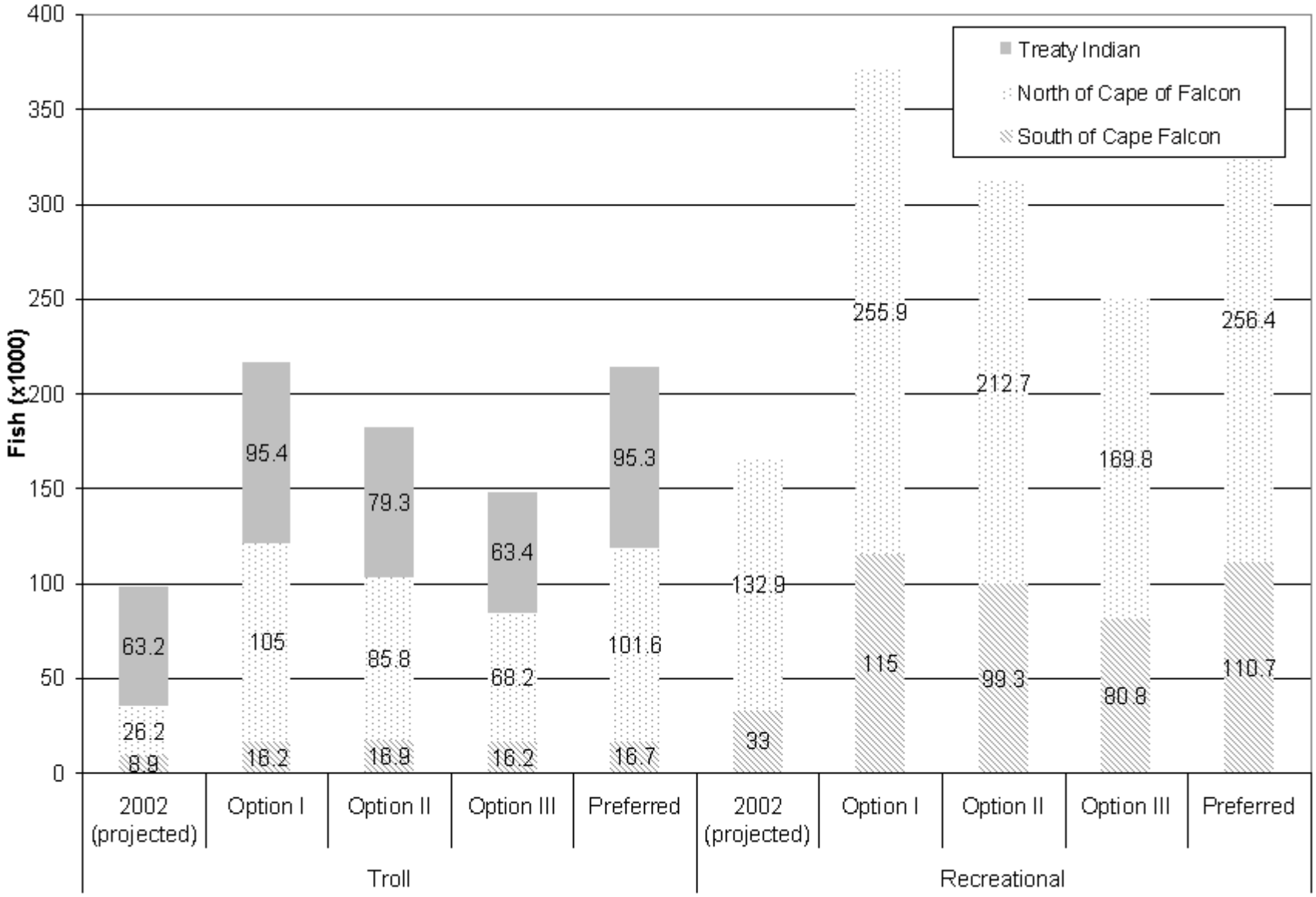

Figure 4-2: Coho harvest impacts (landed catch plus bycatch mortality).

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5 Consistency with Other Applicable Law

5.1 Magnuson-Stevens Conservation and Management Act

The Magnuson-Stevens Act provides parameters and guidance for federal fisheries management, requiring that the Councils and NMFS adhere to a broad array of policy ideals. Overarching principles for fisheries management are found in the Act's National Standards. In crafting fisheries management regimes, the Councils and NMFS must balance their recommendations to meet these different national standards.

National Standard 1 requires that "Conservation and management measures shall prevent overfishing while achieving on a continuing basis, the optimum yield from each fishery for the United States fishing industry." The 2003 ocean salmon management measures in the preferred alternative are specifically designed to meet National Standard 1. Season structure, quotas, and other specifications are expected to allow optimal harvest opportunity given the constraints of achieving all conservation objectives and NMFS ESA consultation objectives for Salmon FMU stocks.

National Standard 2 requires the use of the best available scientific information. The analyses of impacts to Salmon FMU stocks are based on models that have undergone review by the Council's Scientific and Statistical committee and been approved for use by the Council. Input data are obtained from scientifically designed surveys and data recording systems administered by state, federal, and tribal agencies, and verified during the preseason planning process by the Salmon Technical Team. Most stock forecasts are reviewed by multiagency scientific bodies to ensure accurate and appropriate methodology are used and to facilitate agreement between the relevant parties.

National Standard 3 requires individual stocks of fish to be managed as a unit throughout their ranges, and interrelated stocks of fish to be managed as a unit. The conservation objectives are established for individual stocks in the Salmon FMP, and are based on either escapement or on total exploitation rate, both of which account for impacts to stocks throughout their range. All salmon FMU stocks are managed as a unit in Council area fisheries.

National Standard 4 requires that "Conservation and management measures shall not discriminate between residents of different States." All alternatives meet this standard.

National Standard 5 requires efficiency in the utilization of fishery resources. All alternatives meet this standard.

National Standard 6 requires conservation objectives and management measures to take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches. All alternatives allow for inseason management of Council area salmon fisheries to meet conservation objectives and preseason management objectives.

National Standard 7 requires that conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication. All alternatives meet this standard.

National Standard 8 requires that conservation and management measures shall 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." Fishing communities could be negatively affected by the no action alternative and Options II and III, which have substantially lower short term economic benefits than the preferred alternative, and by Option I, which could have reduced long term economic benefits associated with overharvest of stocks of concern.

National Standard 9 requires the reduction of bycatch or bycatch mortality. All alternatives have specifications that reduce both bycatch and bycatch mortality of non-target and sublegal target species.

National Standard 10 requires conservation and management measures to promote the safety of human life at sea. All alternatives meet this standard.

The SEIS for the Salmon FMP concluded that Council area salmon fisheries would have no significant effects on essential fish habitat (EFH). The alternatives considered in this EA are within the scope of impacts considered in the SEIS, and therefore are not expected to have any additional effects on essential fish habitat.

5.2 Consistency with the FMP

Similar to the Magnuson-Stevens Act National Standard guidelines, the goals and objectives of the Salmon FMP are intended to provide a framework to guide the Council's decisions. The preferred alternative meets all conservation and management objectives in the Salmon FMP. The SEIS for the Salmon FMP analyzed the effects anticipated Council area salmon fisheries would have on the biological and socio-economic environment. The effects of the preferred alternative are within the scope of impacts considered in the SEIS.

5.3 Paperwork Reduction Act

None of the alternatives require collection-of-information subject to the PRA.

5.4 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) of 1972 is the principle federal legislation that guides marine mammal species protection and conservation policy in the United States. Under the MMPA, NMFS is responsible for the management and conservation of 153 stocks of whales, dolphins, porpoise, as well as seals, sea lions, and fur seals while the USFWS is responsible for walrus, sea otters, and the West Indian manatee.

Off the West Coast, the Steller sea lion (*Eumetopias jubatus*) Eastern stock, Guadalupe fur seal (*Arctocephalus townsendi*), and Southern sea otter (*Enhydra lutris*) California stock are listed as threatened under the ESA and the sperm whale (*Physeter macrocephalus*) Washington, Oregon, and California (WOC) Stock, humpback whale (*Megaptera novaeangliae*) WOC - Mexico Stock, blue whale (*Balaenoptera musculus*) Eastern north Pacific stock, and Fin whale (*Balaenoptera physalus*) WOC Stock are listed as depleted under the MMPA. Any species listed as endangered or threatened under the ESA is automatically considered depleted under the MMPA.

The West Coast ocean salmon fisheries are considered a Category III fishery, indicating a remote likelihood of or no known serious injuries or mortalities to marine mammals, in the annual list of fisheries published in the Federal Register. Based on its Category III status, the incidental take of marine mammals in the West Coast salmon fisheries does not significantly impact marine mammal stocks.

5.5 National Environmental Policy Act (NEPA)

This EA is intended to meet the NEPA requirements that apply to the proposed action.

5.6 Endangered Species Act (ESA)

Compliance with the ESA is addressed in sections 1.5, 2.1, 3.2, 4.1.3, 4.2.3, and 4.3.3 of this EA. All alternatives would meet NMFS ESA consultation standards for listed salmon stocks except for Option I, which would exceed the recovery exploitation rate for lower Columbia River natural tule chinook.

The following biological opinions (BO) and Section 4(d) determinations have been prepared for West Coast stocks by NMFS. Many of these documents are available from the NMFS Northwest Region website at: http://www.nwr.noaa.gov/1publcat/allbiops.htm

Date (Coverage)	Duration	ESU covered
March 8, 1996 (BO)	until reinitiated 5 years	Snake River chinook and sockeye Sacramento River winter chinook
April 28, 1999 (BO)	until reinitiated	S. Oregon/Northern California Coastal coho Central California Coastal coho Oregon Coastal Natural coho
April 28, 2000 (BO)	until reinitiated	Central Valley Spring-Run chinook California Coastal chinook
April 27, 2001 (4(d) Limit)	until reinitiated	Hood Canal summer chum
April 30, 2001 (BO)	until reinitiated	Lower Columbia River chinook Upper Willamette River chinook Upper Columbia River spring chinook Ozette Lake sockeye ten steelhead ESUs Columbia River chum
April 29, 2002	2 years	Sacramento winter chinook
Pending (4(d) limit and BO)	1 year	Puget Sound chinook

5.7 Coastal Zone Management Act

Section 307(c)(1) of the Federal Coastal Zone Management Act (CZMA) of 1972 requires all federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. The preferred alternative would be implemented in a manner that is consistent to the maximum extent practicable with the enforceable policies of the approved coastal zone management programs of Washington, Oregon, and California. This determination has been submitted to the responsible state agencies for review under section 307(c)(1) of the Coastal Zone Management Act (CZMA). The relationship of the Salmon FMP with the CZMA is discussed in Section 3.3 of the SEIS for Salmon FMP Amendment 14. The Salmon FMP has been found to be consistent with the Washington, Oregon, and California coastal zone management programs. The recommended action is consistent and within the scope of the actions contemplated under the framework FMP.

Under the CZMA, each state develops its own coastal zone management program which is then submitted for federal approval. This has resulted in programs which vary widely from one state to the next. None of the alternatives are expected to affect any state's coastal management program.

5.8 Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments

Executive Order 13175 is intended to ensure regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, to strengthen the United States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes.

The Secretary of Commerce recognizes the sovereign status and co-manager role of Indian tribes over shared Federal and tribal fishery resources. At Section 302(b)(5), the Magnuson-Stevens Act reserves a seat on the Council for a representative of an Indian tribe with Federally recognized fishing rights from California, Oregon, Washington, or Idaho.

The U.S. government formally recognizes that the four Washington Coastal Tribes (Makah, Quileute, Hoh, and Quinault) have treaty rights to fish for salmon within the Council managed area. Each of the treaty tribes has the discretion to administer their fisheries and to establish their own policies to achieve program objectives. In addition, other tribes with federally recognized fishing rights may be impacted by Council area fisheries, including tribes from Puget sound, the Columbia River, and the Klamath River. Accordingly, tribal allocations and regulations have been developed in consultation with the affected tribe(s) and, insofar as possible, with tribal consensus.

5.9 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 was designed to end the commercial trade of migratory birds and their feathers that, by the early years of the 20th century, had diminished populations of many native bird species. The Act states that it is unlawful to take, kill, or possess migratory birds and their parts (including eggs, nests, and feathers) and is a shared agreement between the United States, Canada, Japan, Mexico, and Russia to protect a common migratory bird resource. The Migratory Bird Treaty Act prohibits the directed take of seabirds, but the incidental take of seabirds does occur. None of the alternatives are likely to affect the incidental take of seabirds protected by the Migratory Bird Treaty Act.

5.10 Executive Order 12898 – Environmental Justice

Executive Order 12898 obligates federal agencies to identify and address "disproportionately high adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations in the United States" as part of any overall environmental analysis associated with an action. NOAA guidance, NAO 216-6, at §7.02, states that "consideration of E.O. 12898 should be specifically included in the NEPA documentation for decision making purposes." Agencies should also encourage public participation—especially by affected communities—as part of a broader strategy to address environmental justice issues.

The environmental justice analysis must first identify minority and low-income groups that live in the project area and may be affected by the action. Typically, census data are used to document the occurrence and distribution of these groups. Agencies should be cognizant of distinct cultural, social, economic or occupational factor that could amplify the adverse effects of the proposed action. (For example, if a particular kind of fish is an important dietary component, fishery management actions affecting the availability or price of that fish could have a disproportionate effect.) In the case of Indian tribes, pertinent treaty or other special rights should be considered. Once communities have been identified and characterized and potential adverse impacts of the alternatives are identified, the analysis must determine whether these impacts are disproportionate. Because of the context in which environmental justice developed, health effects are usually considered and three factors may be used in an evaluation: whether the effects are deemed significant, as the term is employed by NEPA; whether the rate or risk of exposure to the effect appreciably exceeds the rate for the general population or some other comparison group; and whether the group in question may be affected by cumulative or multiple sources of exposure. If disproportionately high adverse effects are identified, mitigation measures should be proposed. Community input into appropriate mitigation is encouraged.

The conservation and management objectives established in the Salmon FMP, and by extension, the alternatives considered in this EA, are not expected to affect minority and low-income communities. West Coast Indian tribes are part of the Council's decision-making process on salmon management issues and tribes with treaty rights to salmon, groundfish, or halibut have a seat on the Council. Available demographic data detailed in the SEIS show that coastal counties where fishing communities are located are variable in terms of social indicators like income, employment, and race and ethnic composition. Generally, the preferred alternatives are intended to maintain current fishing practices and schedules while improving Council and

NMFS efficiency in implementing specifications and management measures. As a result, the alternatives are not expected to have notable effects on fishing communities in general, nor on minority and low income groups in particular.

5.11 Executive Order 13132 – Federalism

Executive Order 13132 enumerates eight "fundamental federalism principles." The first of these principles states "Federalism is rooted in the belief that issues that are not national in scope or significance are most appropriately addressed by the level of government closest to the people." In this spirit, the Executive Order directs agencies to consider the implications of policies that may limit the scope of or preempt states' legal authority. Preemptive action having such "federalism implications" is subject to a consultation process with the states; such actions should not create unfunded mandates for the states; and any final rule published must be accompanied by a "federalism summary impact statement."

The Council and process offers many opportunities for states and Indian tribes (through their agencies, Council appointees, consultations, and meetings) to participate in the formulation of management measures. This process encourages states and tribes to institute complementary measures to manage fisheries under their jurisdiction that may affect federally managed stocks.

The proposed actions would not have federalism implications subject to EO 13132.

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6 Reference Material

6.1 Bibliography

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Pacific Fishery Management Council. 2003. *Final Environmental Impact Statement for the Proposed Groundfish Acceptable Biological Catch and Optimum Yield Specifications and Management Measures: 2003 Pacific Coast Groundfish Fishery.* Pacific Fishery Management Council, Portland, OR.

Pacific Fishery Management Council. 2003. *Review of 2002 ocean salmon fisheries*. (Document prepared for the Council and its advisory entities.) Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 200, Portland, Oregon 97220-1384.

Pacific Fishery Management Council. 2003. *Preseason report I stock abundance analysis for 2003 ocean salmon fisheries*. (Document prepared for the Council and its advisory entities.) Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 200, Portland, Oregon 97220-1384.

Pacific Fishery Management Council. 2003. *Preseason report II - Analysis of proposed regulatory options for 2003 ocean salmon fisheries*. (Document prepared for the Council and its advisory entities.) Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 200, Portland, Oregon 97220-1384.

Pacific Fishery Management Council. 2003. *Preseason report III - Analysis of Council adopted management measures for 2003 ocean salmon fisheries*. (Document prepared for the Council and its advisory entities.) Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 200, Portland, Oregon 97220-1384.

6.2 List of Public Meetings, Agencies, and Persons Consulted

The following public meetings were held as part of the salmon management process (Council-sponsored meetings in bold):

October 15, 2002 and February 5, 2003: **Salmon Technical Team/Scientific and Statistical Committee Salmon Subcommittee joint meeting**, Portland, Oregon.

January 17: Washington Fish and Wildlife Commission meeting, Olympia, Washington.

January 21-24: **Salmon Technical Team (Review preparation)**, Portland, Oregon.

February 7: Washington Fish and Wildlife Commission meeting, Longview, Washington.

February 18-21: **Salmon Technical Team (Preseason Report I preparation)**, Portland, Oregon.

Feb 27-28: Klamath Fishery Management Council meeting, Brookings, Oregon.

March 3: Washington Department of Fish and Wildlife public meeting, Olympia, Washington.

March 5: Oregon Salmon Industry Group meeting, Newport, Oregon.

March 9-14: Klamath Fishery Management Council meeting concurrent with the Pacific Fishery Management Council, Sacramento, California.

March 10-14: **Pacific Fishery Management Council meeting**, Sacramento, California.

March 15: Washington Fish and Wildlife Commission meeting, Olympia, Washington.

March 20-21: North of Falcon and US v Oregon Forums, Olympia, Washington.

March 21: Oregon Fish and Wildlife Commission meeting, Newport, Oregon.

March 25: California Fish and Game Commission meeting to discuss ocean options and Klamath basin river regulations, Crescent City, California.

March 31-April 1: **Public hearings on management options** in Westport, Washington; Coos Bay, Oregon; and Eureka, California.

April 2-3: North of Falcon and US v Oregon Forums, Seattle, Washington.

April 3-4: California Fish and Game Commission meeting to take public testimony, adopt Klamath river regulations and set the percentage of the non-tribal share of inside ocean recreational fishing, Visalia California.

March 7-11: Klamath Fishery Management Council meeting concurrent with the Pacific Fishery Management Council, Vancouver, Washington.

April 7-11: **Pacific Fishery Management Council meeting**, Vancouver, Washington.

April 11: Oregon Fish and Wildlife Commission meeting, Portland, Oregon.

The following organizations were consulted and/or participated in preparation of supporting documents:

California Department of Fish and Game
Oregon Department of Fish and Wildlife
Washington Department of Fish and Wildlife

National Marine Fisheries Service, Sustainable Fisheries Division, Northwest Region
National Marine Fisheries Service, Northwest Fisheries Science Center
National Marine Fisheries Service, Southwest Fisheries Science Center
U.S. Fish and Wildlife Service, Columbia River Fisheries Program Office

West Coast Indian Tribes

6.3 List of Preparers

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7 Appendix A: Detailed Descriptions of Management Alternatives

TABLE A-1a. 2003 commercial management measures.

A. DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 124,000 chinook and 300,000 coho.
2. No trade between recreational and commercial fisheries.
3. Non-Indian Troll TAC: 64,400 chinook and 75,000 coho.
4. Treaty Indian commercial ocean troll quotas of: 60,000 chinook (30,000 in May and June; 30,000 for the all-salmon season in July through September 15, with no rollover allowed from May-June season); and 90,000 coho.

U.S./Canada Border to Cape Falcon

- May 1 through earlier of June 30 or 40,000 chinook quota. The fishery will be managed to provide a remaining quota of 800 chinook for a June 26-30 open period with a 50 fish per vessel landing limit for the five-day open period.

All salmon except coho (B; C.6). Cape Flattery and Columbia Control Zones closed (C.4). See gear restrictions (C.2). Vessels must land and deliver their fish within the area or in Garibaldi, Oregon, and within 24 hours of any closure of this fishery. State regulations require that fishers south of Cape Falcon intending to fish within this area, and/or fishers fishing within this area intending to land salmon in Garibaldi, Oregon, notify Oregon Department of Fish and Wildlife (ODFW) before transiting the Cape Falcon line (45° 46'00" N. lat.) at the following phone number: (541) 867-0300 Ex. 252. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).

U.S./Canada Border to Cape Falcon

- July 3 through earlier of September 14 or 24,400 preseason chinook guideline (C.7.a), or a 75,000 coho quota.

Fishery is 5-days open/2-days closed. Landing limit of 75 chinook per vessel for the period July 3-7; landing limit of 150 chinook per 5-day open period for the remainder of the season. All salmon except no chum retention north of Cape Alava during August and September (B; C.6). All retained coho must have a healed adipose fin clip (C.6). Cape Flattery, and Columbia Control Zones closed; Grays Harbor Control Zone closed beginning August 16 (C.4). See gear restrictions (C.2). Vessels must land and deliver their fish within the area or in Garibaldi, Oregon, and within 24 hours of any closure of this fishery. State regulations require fishers south of Cape Falcon intending to fish within this area, and/or fishers fishing within this area intending to land salmon in Garibaldi, Oregon, notify ODFW before transiting the Cape Falcon line (45° 46'00" N. lat.) at the following phone number: (541) 867-0300 Ex. 252. Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason.

South of Cape Falcon

Cape Falcon to Florence South Jetty

- March 15 through July 16; August 1 through August 19 and September 1 through October 31 (C.8).

All salmon except coho (C.6). Chinook 26 inch minimum size limit, except 27 inches May 1 through September 30 and 28 inches October 1 through October 31 (B). See gear restrictions (C.2) and Oregon state regulations for a description of the closed area at the mouth of Tillamook Bay.

In 2004, the season will open March 15 for all salmon except coho. Chinook 26 inch minimum size limit. This opening could be modified following Council review at its November 2003 meeting.

A. SEASON DESCRIPTION (Continued)

Florence South Jetty to Humbug Mt.

- March 15 through June 30; July 17 through July 31; August 11 through August 29; and September 1 through October 31 (C.8).

All salmon except coho (C.6). Chinook 26 inch minimum size limit, except 27 inches May 1 through September 30 and 28 inches October 1 through October 31 (B). See gear restrictions (C.2).

In 2004, the season will open March 15 for all salmon except coho. Chinook 26 inch minimum size limit. This opening could be modified following Council review at its November 2003 meeting.

Humbug Mt. to OR-CA Border

- March 15 through May 31. All salmon except coho. See gear restrictions (C.2).

- June 1 through earlier of June 30 or 2,500 chinook quota;
- July 1 through earlier of July 31 or 1,200 chinook quota;
- August 1 through earlier of August 29 or 2,500 chinook quota;
- September 1 through earlier of September 30 or 3,000 chinook quota with a chinook 28 inch minimum size limit (B).

No transfer of remaining quota from earlier fisheries allowed (C.8). All salmon except coho. Possession and landing limit of 50 fish per trip June 1 through August 29; 65 fish per trip September 1-30. See gear restrictions (C.2). June 1 through September 30 all salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2004, the season will open March 15 for all salmon except coho. Chinook 26 inch minimum size limit. This opening could be modified following Council review at its November 2003 meeting.

Oregon/California Border to Humboldt South Jetty

- September 1 through earlier of September 30 or 10,000 chinook quota.

All salmon except coho (B). Possession and landing limit of 40 fish per day. All fish caught in this area must be landed within the area and within 24 hours of any closure. See gear restrictions (C.2). Klamath Control Zone closed (C.4.d). When the fishery is closed between the OR-CA border and Humbug Mt. and open to the south, vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon, prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival.

Horse Mt. to Pt. Arena (Fort Bragg)

- May 1 through May 31, July 3 -14; July 18 through September 30.

All salmon except coho (B). No possession or landing limit, or area landing restriction except: July 3 - 14 possession and landing limit of 150 fish per day per vessel and all fish caught in this area must be landed within the area and within 24 hours of any closure. See gear restrictions (C.2).

Pt. Arena to U.S-Mexico Border

- May 1 through September 30.

All salmon except coho (B). See gear restrictions (C.2).

Pt. Reyes to Pt. San Pedro (Fall Area Target Zone)

October 1 through October 17, Monday through Friday. All salmon except coho (B). See gear restrictions (C.2).

B. MINIMUM SIZE (Inches) (See C.1)

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	None
Cape Falcon to Humbug Mt.					
Prior to May 1	26.0	19.5	-	-	None
May 1- September 30	27.0	20.5	-	-	None
October 1-31	28.0	21.5	-	-	None
Humbug Mt. to OR/CA Border					
Prior to September 1	26.0	19.5	-	-	None
September 1-30	28.0	21.5	-	-	None
South of OR/CA Border	26.0	19.5	-	-	None

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions:

a. Single point, single shank barbless hooks are required in all fisheries.

b. *Cape Falcon, Oregon to the Oregon/California border*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

c. *Oregon/California border to U.S./Mexico border*: No more than 6 lines are allowed per vessel and barbless circle hooks are required when fishing with bait by any means other than trolling.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone* - The area from Cape Flattery (48°23'00" N. lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava (48°10'00" N. lat.), and east of 125° 05'00" W. long.

b. *Grays Harbor Control Zone* - The area defined by a line drawn from the Westport Lighthouse (46° 53'18" N. lat., 124° 07'01" W. long.) to Buoy #2 (46° 52'42" N. lat., 124°12'42" W. long.) to Buoy #3 (46° 55'00" N. lat., 124°14'48" W. long.) to the Grays Harbor north jetty (46° 36'00" N. lat., 124°10'51" W. long.).

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

c. *Columbia Control Zone* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

d. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival.

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in measured from the tip of the lower jaw with the mouth closed to the extreme end of the middle of the tail, and must be landed with the head on. License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during May-June troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800-662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 39,300 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip. Halibut retained must be no less than 32 inches in total length (with head on).

A "C-shaped" yelloweye rockfish conservation area is an area to be avoided for salmon troll fishing. The area is defined in the Pacific Council Halibut Catch Sharing Plan in the North Coast subarea (WA marine area 3), with the following coordinates in the order listed:

48°18' N. lat.; 125°18' W. long;
48°18' N. lat.; 124°59' W. long;
48°11' N. lat.; 124°59' W. long;
48°11' N. lat.; 125°11' W. long;
48°04' N. lat.; 125°11' W. long;
48°04' N. lat.; 124°59' W. long;
48°00' N. lat.; 124°59' W. long;
48°00' N. lat.; 125°18' W. long;
And connecting back to 48°18' N. lat.; 125°18' W. long.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. Any chinook remaining in the May-June non-Indian commercial troll harvest guideline north of Cape Falcon may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

b. At the March 2004 meeting, the Council will consider inseason recommendations to: (1) open commercial seasons for all salmon except coho prior to May 1 in the area between Horse Mt. and Point Arena, California, and (2) identify the areas, season, quota, and special regulations for any experimental April fisheries (experimental fishery proposals must meet Council protocol and be received in November 2003).

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

TABLE A-1b. 2003 recreational management measures.

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 124,000 chinook and 300,000 coho.
2. No trade between recreational and commercial fisheries.
3. Recreational TAC: 59,600 chinook and 225,000 coho.
4. No Area 4B add-on fishery.
5. Buoy 10 fishery opens August 1 with an expected landed catch of 35,000 coho with healed adipose fin clips.

U.S.-Canada Border to Cape Alava (Neah Bay Area)

- June 22 through earlier of September 14 or 23,400 coho subarea quota with a subarea guideline of 3,900 chinook.

All salmon except no chum retention north of Cape Alava August 1 through September 14; open 7 days per week, 2 fish per day plus one additional pink salmon, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Chinook non-retention east of the Bonilla-Tatoosh line (C.3.d) during Council managed ocean fishery, except chinook retention allowed July 1 through July 31. Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).

Cape Alava to Queets River (La Push Area)

- June 22 through earlier of September 14 or 5,750 coho subarea quota with a subarea guideline of 2,300 chinook;
- September 20 through earlier of October 5 or 100 coho quota or 100 chinook quota. Inside area defined by a line from Teahwhit Head (47°52'24" N. lat., 124°36'36" W. long.) northwesterly to "Q" buoy (47°53'08" N. lat., 124°40'34" W. long.) to Cake Rock (47°56'00" N. lat., 124°41'12" W. long.) then true east to the shoreline (C.5).

All salmon, open 7 days per week, 2 fish per day plus one additional pink salmon, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).

Queets River to Leadbetter Pt. (Westport Area)

- June 22 through earlier of September 14 or 83,250 coho subarea quota with a subarea guideline of 40,600 chinook.

Open Sunday through Thursday All salmon, 2 fish per day, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Grays Harbor Control Zone closed beginning August 16 (C.3.b). Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).

Leadbetter Pt. to Cape Falcon (Columbia River Area)

- June 29 through earlier of September 30 or 112,500 coho subarea quota with a subarea guideline of 12,700 chinook.

Open Sunday through Thursday A conference call will be scheduled for a day no later than August 6 to discuss opening 7 days per week. All salmon. Two fish per day, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Columbia Control Zone closed (C.3.a). Closed between Cape Falcon and Tillamook Head beginning August 1. Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).

TABLE A-1b. 2003 recreational management measures.

A. SEASON DESCRIPTION (Continued)

South of Cape Falcon

Cape Falcon to Humbug Mt.

- Except as provided below during the mark selective fishery, the season will be: March 15 through October 31 (C.5).

All salmon except coho (B). Open 7 days per week, 2 fish per day. See gear restrictions (C.2.). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay (C.5).

In 2004, the season will open March 15 for all salmon except coho. Open 7 days per week, 2 fish per day. This opening could be modified following Council review at its November 2003 meeting.

Selective fishery for marked coho:

- June 21 through earlier of August 24 or a landed catch of 88,000 coho.

Open 7 days per week. All salmon (B). 2 fish per day. All retained coho must have a healed adipose fin clip. Open days may be adjusted inseason to utilize the available quota (C.4). All salmon except coho season reopens the earlier of August 25 or attainment of the coho quota.

Humbug Mt. to Horse Mt. (Klamath Management Zone)

- May 17 through September 14.

All salmon except coho (B). Open 7 days per week, 2 fish per day. See gear restrictions (C.2). Klamath Control Zone closed (C.3.c).

Horse Mt. to Pt. Arena (Fort Bragg)

- February 15 through November 16.

All salmon except coho. Open 7 days per week, 2 fish per day. Chinook minimum size limit 24 inches through April 30, and 20 inches thereafter (B). See gear restrictions (C.2).

In 2004, season opens February 14 (nearest Saturday to February 15) for all salmon except coho. Open 7 days per week, 2 fish per day, chinook 24-inch minimum size limit (B) and the same gear restrictions as in 2003 (C.2).

Pt. Arena to Pigeon Pt. (San Francisco)

- April 12 through November 9.

All salmon except coho. Open 7 days per week, 2 fish per day. Chinook minimum size limit 24 inches through April 30, and 20 inches thereafter (B). See gear restrictions (C.2).

In 2004, the season will open April 17 for all salmon except coho. Open 7 days per week, 2 fish per day, chinook 24-inch minimum size limit (B) and the same gear restrictions as in 2003 (C.2).

Pigeon Pt. to U.S.-Mexico Border

- March 29 through September 28.

All salmon except coho. Open 7 days per week, 2 fish per day. Chinook minimum size limit 24 inches through April 30, and 20 inches thereafter (B). See gear restrictions(C.2).

In 2004, the season will open April 3 for all salmon except coho. Open 7 days per week, 2 fish per day, chinook 24-inch minimum size limit (B) and the same gear restrictions as in 2003 (C.2).

TABLE A-1b. 2003 recreational management measures.

B. MINIMUM SIZE (Total Length in Inches) (See C.1)

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	26.0	16.0	None
Cape Falcon to Horse Mt.	20.0	16.0	None, except 20.0 off CA
South of Horse Mt. Prior to May 1	24.0	-	20.0
Beginning May 1	20.0	-	20.0

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished, and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat or floating device with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. *U.S./Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank barbless hooks are required for all fishing gear. [Note: ODFW regulations in the state-waters fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]

b. *Cape Falcon, Oregon to Pt. Conception, California*: Anglers must use no more than 2 single point, single shank barbless hooks.

c. *Horse Mt., California to Pt. Conception, California*: Single point, single shank, barbless circle hooks (below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

a. Columbia Control Zone - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

TABLE A-1b. 2003 recreational management measures.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (continued)

b. *Grays Harbor Control Zone* - The area defined by a line drawn from the Westport Lighthouse (46° 53'18" N. lat., 124° 07'01" W. long.) to Buoy #2 (46° 52'42" N. lat., 124° 12'42" W. long.) to Buoy #3 (46° 55'00" N. lat., 124°14'48" W. long.) to the Grays Harbor north jetty (46° 36'00" N. lat., 124° 10'51" W. long.).

c. Klamath Control Zone - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

d. The Bonilla-Tatoosh Line is defined as: A line running from the western end of Cape Flattery to Tatoosh Island Lighthouse (48˚23'30" N. lat., 124˚44'12" W. long.) to the buoy adjacent to Duntze Rock (48˚28'00" N. lat., 124˚45'00" W. long.), then in a straight line to Bonilla Point (48˚35'30" N. lat., 124˚43'00" W. long.) on Vancouver Island, B.C.

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines, and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas north of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with the states, Council, representatives of the affected ports, and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

TABLE A-1c. 2003 Treaty Indian management measures.

Tribe and Area Boundaries[a/]	Open Seasons	Salmon Species	Minimum Size[b/] (Inches) Chinook	Coho	Special Restrictions by Area
S'KLALLAM - Washington State Statistical Area 4B (All)	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat; 72 hook maximum per boat.
	July 1 thru earliest of September 15 or chinook or coho quota.[c/]	All	24	16	
MAKAH - Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat or no more than 4 hand-held lines per person.
	July 1 thru earliest of September 15 or chinook or coho quota[c/]	All	24	16	
QUILEUTE - That portion of the FMA between 48°07'36" N. lat. (Sand Pt.) and 47°31'42" N. lat. (Queets River) and east of 125°44'00" W. long.	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat.[e/]
	July 1 thru earliest of September 15 or chinook or coho quota.[c/d/]	All	24	16	
HOH - That portion of the FMA between 47°54'18" N. lat. (Quillayute River) and 47°21'00" N. lat. (Quinault River) and east of 125°44'00" W. long.	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat.[d/]
	July 1 thru earliest of September 15 or chinook or coho quota[c/]	All	24	16	
QUINAULT - That portion of the FMA between 47°40'06" N. lat. (Destruction Island) and 46°53'18" N. lat. (Point Chehalis) and east of 125°44'00" W. long.	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat.[d/]
	July 1 thru earliest of September 15 or chinook or coho quota[c/]	All	24	16	

a/ All boundaries may be changed to include such other areas as may hereafter be authorized by a Federal court for that tribe's treaty fishery.

b/ Applicable lengths, in inches, for dressed, head-off salmon, are 18 inches for chinook and 12 inches for coho. There are no minimum size or retention limits for ceremonial and subsistence harvest.

c/ The overall treaty troll ocean quotas are: 60,000 chinook and 90,000 coho. The overall chinook quota is divided into 30,000 chinook for the May/June chinook-directed fishery and 30,000 chinook for the July through September all-salmon season. If the chinook quota for the May/June fishery is not fully utilized, the excess fish cannot be transferred into the later all-salmon season. The quotas include troll catches by the S'Klallam and Makah tribes in Washington State Statistical Area 4B from May 1 through September 15.

d/ The Quileute Tribe will continue a ceremonial and subsistence fishery during the time frame of September 15 through October 15 in the same manner as in 2002; fish taken during this fishery are to be counted against treaty Indian ocean troll quotas established for the July through September 2003 season (see c/ above).

e/ The area within a 6 nautical mile radius of the mouths of the Queets River (47°31'42" N. lat.) and the Hoh River (47°45'12" N. lat.) will be closed to commercial fishing. A closure within 2 nautical miles of the mouth of the Quinault River (47°21'00" N. lat.) may be enacted by the Quinault Nation and/or the State of Washington and will not adversely affect the Secretary of Commerce's management regime.

TABLE A-2a. 2002 commercial management measures.

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 140,000 coho.
   Trade: 10,000 coho to recreational fishery for 2,500 chinook.
2. Non-Indian Troll TAC: 82,500 chinook and 25,000 coho.
3. Treaty Indian commercial ocean troll quotas of: 60,000 chinook (30,000 in May and June; 30,000 for all-salmon season in July through Sept. 15 with no rollover allowed from chinook season); and 60,000 coho.

U.S./Canada Border to Cape Falcon

May 1 through earlier of June 30 or 50,000 chinook quota. All salmon except coho (C.6). See gear restrictions (C.2.a). Cape Flattery and Columbia Control Zones closed (C.4.a, C.4.b). Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon , and within 24 hours of any closure of this fishery; State regulations require that fishers fishing within this area and intending to land salmon south of Cape Falcon notify ODFW before they leave the area at the following phone number (541) 867-0300 Ex. 252. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).

Except as provided below during the selective fishery, the season will be: July 1 through earlier of Sept. 8 or 32,500 chinook quota (C.7.a). All salmon except coho, and no chum retention north of Cape Alava during August and September. Gear restricted to plugs 6 inches or longer between U.S.-Canada Border to Leadbetter Point (C.2.b). Cape Flattery and Columbia Control Zones closed (C.4.a, C.4.b). Vessels must land and deliver their fish within the area, in adjacent areas closed to commercial non-Indian salmon fishing, or in areas south of Cape Falcon, and within 24 hours of any closure of this fishery. No more than four spreads per line between Cape Falcon and Leadbetter Point (C.2.c). Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason (C.7.a).

Selective fishery for adipose fin clipped coho

Leadbetter Point to Cape Falcon - All salmon Aug. 1 through earlier of Sept. 8 or subarea quota of 5,000 adipose fin clipped coho (all retained coho must have a healed adipose fin clip). Fishery will remain open for all salmon except coho after the coho quota is reached, provided adequate chinook impacts remain on the 32,500 chinook quota. Washington state regulations require fishers fishing within this subarea to land **coho** south of Leadbetter Point. Oregon state regulations require that fishers fishing within this subarea and intending to land **chinook or coho** south of this subarea notify ODFW before they leave the subarea at the following phone number (541) 867-0300 Ex. 252. Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason.

South of Cape Falcon

Cape Falcon to Florence South Jetty

March 20 through July 15; Aug. 1 through Aug. 29; and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2.a, C.2.d) and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay.

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

Florence South Jetty to Humbug Mt.

March 20 through June 30; July 17 through Aug. 29; and Sept. 1 through Oct. 31. All salmon except coho. See gear restrictions (C.2.a, C.2.d).

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

Humbug Mt. to Oregon/California Border

March 20 through May 31. All salmon except coho. See gear restrictions (C.2.a, C.2.d).

June 1 through earlier of June 30 or 3,000 chinook quota; July 1 through earlier of July 31 or 1,500 chinook quota; Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota; and Sept. 1 through earlier of Sept. 30 or 2,000 chinook quota. No transfer of remaining quota from earlier fisheries allowed. All salmon except coho. Possession and landing limit of 50 fish per trip. See gear restrictions (C.2.a, C.2.d). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure.

In 2003 the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2002 meeting.

Oregon/California Border to Humboldt South Jetty

Aug. 16 through the earlier of August 30 or 3,000 chinook quota and Sept. 1 through earlier of Sept. 30 or 10,000 chinook quota. All salmon except coho. Possession and landing limit of 40 fish per day. See gear restrictions (C.2.a, C.2.e). All fish must be landed within the area and within 24 hours of any closure of the fishery. When the fishery is closed between the Oregon/California border and Humbug Mt. and open to the south, vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon, prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival. Klamath Control Zone closed (C.4.c).

Horse Mt. to Pt. Arena (Fort Bragg)

July 20 through earlier of July 30 or 10,000 chinook quota; Aug. 1 through Aug. 30; and Sept. 1 through Sept. 30. All salmon except coho. All fish caught in this area in July and Aug. must be landed within the area. All fish caught in this area must be landed within 24 hours of any closure of the fishery. See gear restrictions (C.2.a, C.2.e).

Pt. Arena to Pigeon Point (San Francisco)

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches total length. See gear restrictions (C.2.a, C.2.e).

Pt. Reyes to Pt. San Pedro (Fall Area Target Zone)

Oct. 1 through Oct. 18, Monday through Friday. All salmon except coho. Minimum size limit 26 inches total length. See gear restrictions (C.2.a, C.2.e).

Pigeon Pt. to U.S./Mexico Border

May 1 through Sept. 30. All salmon except coho. Minimum size limit 26 inches total length. See gear restrictions (C.2.a, C.2.e).

B. MINIMUM SIZE (Inches)

	Chinook		Coho		
Area (when open)	Total Length	Head-off	Total Length	Head-off	Pink
North of Cape Falcon	28.0	21.5	16.0	12.0	None
South of Cape Falcon	26.0[a/]	19.5[a/]	-	-	None

a/ Chinook not less than 26 inches total length (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions:

a. Single point, single shank, barbless hooks are required in all fisheries.

b. *U.S. Canada Border to Leadbetter Point, July 1 to September 8:* Gear restricted to plugs with a one piece body that is at least six inches long, not including hooks or attachments.

c. *Leadbetter Point to Cape Falcon, July 1 to September 8*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

d. *Off Oregon South of Cape Falcon*: No more than 4 spreads are allowed per line.

e. *Off California:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to fishing for a certain species of salmon, while possessing that species of salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone (Figure 2)* - The area from Cape Flattery (48°23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava, 48°15'00" N lat. and east of 125° 05'00" W long.

b. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival. This stipulation will be implemented by state regulations for California, Oregon and Washington, as required.

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in measured from the tip of the lower jaw with the mouth closed to the extreme end of the middle of the tail, and must be landed with the head on. License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800-662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 39,300 pound preseason allocation or

the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. In the overall non-Indian commercial chinook quota north of Cape Falcon, 20,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 20,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 20,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

b. At the March 2003 meeting, the Council will consider inseason recommendations to open commercial seasons for all salmon except coho prior to May 1 in areas off Oregon and Washington north of Cape Falcon.

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the \KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

TABLE A-2b. 2002 recreational management measures.

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

1. Overall non-Indian TAC: 150,000 chinook and 140,000 coho.
   Trade: 2,500 chinook to non-Indian troll for 10,000 coho.
2. Recreational TAC: 67,500 chinook and 115,000 coho.
3. No Area 4B add-on fishery.
4. Buoy 10 fishery opens Aug. 1 with an expected landed catch of 19,000 adipose fin clipped coho.

U.S./Canada Border to Cape Falcon

May 25 through earlier of June 16 or 20,000 chinook quota (7 days per week) (C.4.a). Chinook salmon only; 2 fish per day. See gear restrictions (C.2.a). Columbia Control Zone closed (C.3.a).

U.S./Canada Border to Cape Alava (Neah Bay Area)

July 7 through earlier of Sept. 8 or 11,780 coho subarea quota, 7 days per week. All salmon, except during August and September no chum retention; 2 fish per day and all retained coho must have a healed adipose fin clip. Chinook non-retention east of the Bonilla-Tatoosh line during the Council managed recreational ocean fishery in July through September (C.3.c). Inseason management may be used to sustain season length and keep harvest within a guideline of 2,600 chinook (C.4).

Cape Alava to Queets River (La Push Area)

July 7 through earlier of Sept. 8 or 2,770 coho subarea quota; Sept. 21 through earlier of Oct. 6 or overall subarea quota of 100 coho and 100 chinook; 7 days per week. All salmon; 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2.a). Inseason management may be used to sustain season length and keep harvest within a guideline of 1,600 chinook (C.4).

Queets River to Leadbetter Pt. (Westport Area)

June 30 through earlier of Sept. 8 or 39,280 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week thereafter. All salmon. 2 fish per day and all retained coho must have a healed adipose fin clip. See gear restrictions (C.2.a). Inseason management may be used to sustain season length and keep harvest within a guideline of 32,000 chinook (C.4).

Leadbetter Pt. to Cape Falcon (Columbia River Area)

July 7 through earlier of Sept. 30 or 55,700 coho subarea quota. Sun. through Thurs. prior to Aug. 16, 7 days per week beginning Aug. 16. All salmon. Two fish per day and all retained coho must have a healed adipose fin clip. Closed between Cape Falcon and Tillamook Head beginning Aug.1. Columbia Control Zone closed (C.3.a). See gear restrictions (C.2.a). Inseason management may be used to sustain season length and keep harvest within a guideline of 11,200 chinook (C.4).

South of Cape Falcon

Cape Falcon to Humbug Mt.

Except as provided below during the selective fishery, the season will be: Apr. 1 through Oct. 31. All salmon except coho; 2 fish per day. See gear restrictions (C.2.a, C.2.b). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay.

In 2003 the season will open March 15 for all salmon except coho. Two fish per day. Same gear restrictions as in 2002. This opening could be modified following Council review at its November 2002 meeting.

Selective fishery for marked coho:

July 7 through earlier of Aug. 4 or a landed catch of 22,500 coho; 7 days per week . All salmon; 2 fish per day, all retained coho must have a healed adipose fin clip. See gear restrictions (C.2.a, C.2.b). Open days may be adjusted to utilize the available quota. All salmon except coho season reopens the earlier of Aug. 5 or attainment of the coho quota.

Humbug Mt. to Horse Mt. (Klamath Management Zone)

May 15 through June 30; July 3 and 4; and Aug. 1 through Sept. 15. All salmon except coho; 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions (C.2.a, C.2.b). Klamath Control Zone closed in August (C.3.b).

Horse Mt. to Pt. Arena (Fort Bragg)

Feb. 16 through July 7 and July 20 through Nov. 17. All salmon except coho; 2 fish per day. Minimum size 24 inches total length through April 30 and 20 inches total length thereafter. See gear restrictions (C.2.a, C.2.b, C.2.c).

In 2003, season opens Feb. 15 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, 24 inch total length minimum size limit and the same gear restrictions as in 2002.

Pt. Arena to Pigeon Pt. (San Francisco)

Apr. 13 through Nov. 10. All salmon except coho; 2 fish per day. Minimum size limit 24 inches total length through April 30 and 20 inches total length thereafter. See gear restrictions (C.2.a, C.2.b, C.2.c).

In 2003, the season will open Apr. 12 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

Pigeon Pt. to U.S.-Mexico Border

Mar. 30 through Sept. 29. All salmon except coho; 2 fish per day. Minimum size limit 24 inches total length through April 30 and 20 inches total length thereafter. See gear restrictions (C.2.a, C.2.b, C.2.c).

In 2003, the season will open Mar. 29 for all salmon except coho. Two fish per day, 24 inch minimum size limit and the same gear restrictions as in 2002.

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to Horse Mt.	20.0	16.0	None, except 20.0 off CA
South of Horse Mt. Prior to May 1	24.0	-	20.0
Beginning May 1	20.0	-	20.0

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished, and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat or floating device with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. *U.S./Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank barbless hooks are required for all fishing gear. [Note: ODFW regulations in the state-waters fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]

b. Between Cape Falcon , Oregon and Point Conception, California: Anglers must use no more than 2 single point, single shank, barbless hooks.

c. Off California between Horse Mt. and Pt. Conception: Single point, single shank, barbless **circle** hooks (see circle hook definition below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

a. Columbia Control Zone (Figure 3) - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°15'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

b. Klamath Control Zone - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

c. The Bonilla-Tatoosh Line is defined as: A line running from the western end of Cape Flattery to Tatoosh Island Lighthouse (48°23'30" N. lat., 124°44'12" W. long.) to the buoy adjacent to Duntze Rock (48°28'00" N. lat., 124°45'00" W. long.), then in a straight line to Bonilla Point (48°35'30" N. lat., 124°43'00" W. long.) on Vancouver Island, B.C.

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines, and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas north of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with the states, Council, representatives of the affected ports, and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

In addition, the following guidance is provided to NMFS:

a. In the overall recreational chinook quota north of Cape Falcon, 10,000 chinook from the May/June harvest quota are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 10,000 chinook (or remaining portion thereof) may be transferred to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 10,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

TABLE A-2c. 2002 Treaty Indian management measures.

Tribe and Area Boundaries[a/]	Open Seasons	Salmon Species	Minimum Size[b/] (Inches) Chinook	Coho	Special Restrictions by Area
S'KLALLAM - Washington State Statistical Area 4B (All)	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat; 72 hook maximum per boat.
	July 1 thru earlier of Sept. 15 or chinook or coho quota.[c/]	All	24	16	
MAKAH - Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat or no more than 4 hand-held lines per person.
	July 1 thru earlier of Sept. 15 or chinook or coho quota.[c/]	All	24	16	
QUILEUTE - That portion of the FMA between 48°07'36" N. lat. (Sand Pt.) and 47°31'42" N. lat. (Queets River)	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat.[d/]
	July 1 thru earlier of Sept. 15 or chinook or coho quota.[c/]	All	24	16	
HOH - That portion of the FMA between 47°54'18" N. lat. (Quillayute River) and 47°21'00" N. lat. (Quinault River)	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat.[d/]
	July 1 thru earlier of Sept. 15 or chinook or coho quota.[c/]	All	24	16	
QUINAULT - That portion of the FMA between 47°40'06" N. lat. (Destruction Island) and 46°53'18" N. lat. (Point Chehalis)	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat.[d/]
	July 1 thru earlier of Sept. 15 or chinook or coho quota.[c/]	All	24	16	

a/ All boundaries may be changed to include such other areas as may hereafter be authorized by a Federal court for that tribe's treaty fishery.

b/ Applicable lengths, in inches, for dressed, head-off salmon, are 18 inches for chinook and 12 inches for coho. Minimum size and retention limits for ceremonial and subsistence harvest are as follows:
Makah Tribe - None
Quileute, Hoh and Quinault tribes - Not more than 2 chinook longer than 24 inches in total length may be retained per day. Chinook less than 24 inches total length may be retained.

c/ The overall treaty troll ocean quotas are 60,000 chinook and 60,000 coho. The overall chinook quota is divided into 30,000 chinook for the May/June chinook-directed fishery and 30,000 chinook for the July through Sept. all-salmon season. If the chinook quota for the May/June fishery is not fully utilized, the excess fish cannot be transferred into the later all-salmon season. The quotas include troll catches by the S'Klallam and Makah tribes in Washington State Statistical Area 4B from May 1 thru Sept. 30.

d/ The area within a 6 nautical mile radius of the mouths of the Queets River (47°31'42" N. lat.) and the Hoh River (47°45'12" N. lat.) will be closed to commercial fishing. A closure within 2 nautical miles of the mouth of the Quinault River (47°21'00" N. lat.) may be enacted by the Quinault Nation and/or the State of Washington and will not adversely affect the Secretary of Commerce's management regime.

TABLE A-3a: 2003 Commercial management options (other alternatives).

A. SEASON OPTION DESCRIPTIONS

OPTION I North of Cape Falcon	OPTION II North of Cape Falcon	OPTION III North of Cape Falcon
Supplemental Management Information: 1. Overall non-Indian TAC: 124,000 chinook and 300,000 coho. Trade: May be considered at the April Council meeting. 2. Non-Indian commercial troll TAC: 64,400 chinook and 75,000 coho. 3. Treaty Indian commercial ocean troll quotas of: 60,000 chinook (30,000 in May and June; 30,000 for all-salmon season July through Sept. 15 with no rollover allowed from chinook season); and 90,000 coho.	**Supplemental Management Information:** 1. Overall non-Indian TAC: 115,000 chinook and 250,000 coho. Trade: May be considered at the April Council meeting. 2. Non-Indian commercial troll TAC: 59,000 chinook and 62,500 coho. 3. Treaty Indian commercial ocean troll quotas of: 40,000chinook (20,000 in May and June; 20,000 for all-salmon season July through Sept. 15 with no rollover allowed from chinook season); and 75,000 coho.	**Supplemental Management Information:** 1. Overall non-Indian TAC: 95,000 chinook and 200,000 coho Trade: May be considered at the April Council meeting. 2. Non-Indian commercial troll TAC: 47,500 chinook and 50,000 coho. 3. Treaty Indian commercial ocean troll quotas of: 30,000 chinook (15,000 in May and June; 15,000 for all-salmon season July through Sept. 15 with no rollover allowed from chinook season); and 60,000 coho. 4. Overall Chinook TACs may need to be reduced or fisheries adjusted upon conclusion of NMFS ESA consultation for the Puget Sound Chinook Harvest Resource Management Plan.
U.S./Canada Border to Cape Falcon • May 1 through earlier of June 30 or 50,000 chinook quota. All salmon except coho (C.6). Cape Flattery and Columbia Control Zones closed (C.4). See gear restrictions (C.2). Vessels must land and deliver their fish within the area or in adjacent areas and within 24 hours of any closure of this fishery. State regulations require that fishers south of Cape Falcon intending to fish within this area, and/or fishers fishing within this area intending to land salmon south of Cape Falcon, notify Oregon Department of Fish and Wildlife (ODFW) before transiting the Cape Falcon line (45°46'00'' N lat). Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).	**U.S./Canada Border to Cape Falcon** • May 1 through earlier of June 24 or 35,000 chinook quota. All salmon except coho (C.6). Cape Flattery and Columbia Control Zones closed (C.4). See gear restrictions (C.2). Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).	**U.S./Canada Border to Cape Falcon** • May 1 through earlier of June 30 or 25,000 chinook quota. All salmon except coho (C.6). Cape Flattery and Columbia Control Zones closed (C.4). See gear restrictions (C.2). Vessels must land and deliver their fish within the area and within 24 hours of any closure of this fishery. Inseason actions may modify quotas or harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.7.a).

A. SEASON OPTION DESCRIPTIONS

OPTION I

U.S./Canada Border to Cape Falcon

- July 1 through earlier of Sept. 30 or 14,400 preseason chinook guideline (C.7.a) or a 75,000 coho quota.

All salmon. All retained coho must have a healed adipose fin clip (C.6). Cape Flattery and Columbia Control Zones closed (C.4). No special gear restrictions (C.2). Vessels must land and deliver their fish within the area or in adjacent areas and within 24 hours of any closure of this fishery. State regulations require fishers south of Cape Falcon intending to fish within this area, and/or fishers fishing within this area intending to land salmon south of Cape Falcon, notify ODFW before transiting the Cape Falcon line (45°46'00'' N. lat).Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason.

OPTION II

U.S./Canada Border to Leadbetter Point

- June 26 through earlier of Sept. 30 or 16,500 preseason chinook guideline (C.7.a), or a 42,500 coho quota.

All salmon. All retained coho must have a healed adipose fin clip (C.6). North of Queets River gear restricted to plugs 6 inches or longer; south of Queets River gear restricted to plugs 6 inches or longer prior to July 27 (C.2). Cape Flattery Control Zone closed (C.4). Trip limits, gear restrictions, and quotas or guidelines may be implemented or adjusted inseason. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery.

Leadbetter Point to Cape Falcon

- June 26 through earlier of Sept. 30 or 7,500 preseason chinook guideline (C.7.a) or a 20,000 coho quota.

All salmon (C.6). All retained coho must have a healed adipose fin clip. No special gear restrictions (C.2). Columbia Control Zone closed (C.4). Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Trip limits, gear restrictions, and quotas or guidelines may be implemented or adjusted inseason.

OPTION III

U.S./Canada Border to Cape Falcon

- July 2 through earlier of Sept. 14 or 22,500 preseason chinook guideline or 50,000 coho quota (C.7.a).

Fishery is 5 days open/2 days closed. All salmon (C.6). All retained coho must have a healed adipose fin clip. Columbia and Cape Flattery Control Zones closed (C.4). No special gear restrictions (C.2). Vessels must land and deliver their fish within the area and within 24 hours of any closure of this fishery. Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason.

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
South of Cape Falcon	**South of Cape Falcon**	**South of Cape Falcon**
Cape Falcon to Florence South Jetty • March 15 through July 16; Aug. 1 through Aug. 19 and Sept. 1 through Oct. 31 (C.8). All salmon except coho (C.6). Chinook 26 inch minimum size limit (B). See gear restrictions (C.2) and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay. In 2004, the season will open March 1 for all salmon except coho. This opening could be modified following Council review at its November 2003 meeting.	**Cape Falcon to Florence South Jetty** • March 15 through July 16; Aug. 1 through Aug. 19 and Sept. 1 through Oct. 31 (C.8). All salmon except coho (C.6). Chinook 26 inch minimum size limit except 27 inches May 1 through August 31 (B). See gear restrictions (C.2) and Oregon state regulations for a description of the closed area at the mouth of Tillamook Bay. In 2004, same as Option I.	**Cape Falcon to Florence South Jetty** • March 15 through July 16; Aug. 1 through Aug. 19 and Sept. 1 through Oct. 31 (C.8). All salmon except coho (C.6). Chinook 26 inch minimum size limit except 27 inches May 1 through Aug. 31 and 28 inches Oct. 1-31 (B). See gear restrictions (C.2) and Oregon state regulations for a description of the closed area at the mouth of Tillamook Bay. In 2004, the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2003 meeting.
Florence South Jetty to Humbug Mt. • March 15 through June 30; July 17 through July 31; Aug. 11 through Aug. 29; and Sept. 1 through Oct. 31 (C.8). All salmon except coho (C.6). Chinook 26 inch minimum size limit (B). See gear restrictions (C.2). In 2004, the season will open March 1 for all salmon except coho. This opening could be modified following Council review at its November 2003 meeting.	**Florence South Jetty to Humbug Mt.** • March 15 through June 30; July 17 through July 31; Aug. 11 through Aug. 29; and Sept. 1 through Oct. 31 (C.8). All salmon except coho (C.6). Chinook 26 inch minimum size limit except 27 inches May 1 through August 31 (B). See gear restrictions (C.2). In 2004, same as Option I.	**Florence South Jetty to Humbug Mt.** • March 15 through June 30; July 17 through July 31; Aug. 11 through Aug. 29; and Sept. 1 through Oct. 31 (C.8). All salmon except coho (C.6). Chinook 26 inch minimum size limit except 27 inches May 1 through Aug. 31 and 28 inches Oct. 1 through Oct. 31 (B). See gear restrictions (C.2). In 2004, the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2003 meeting.

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
Humbug Mt. to OR/CA Border • March 15 through May 31. All salmon except coho. See gear restrictions (C.2). • June 1 through earlier of June 30 or 3,000 chinook quota; • July 1 through earlier of July 31 or 1,500 chinook quota; • Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota; • Sept. 1 through earlier of Sept. 30 or 4,000 chinook quota with a chinook 30 inch minimum size limit. No transfer of remaining quota from earlier fisheries allowed (C.8). All salmon except coho. Possession and landing limit of 50 fish per day per vessel prior to Sept. 1; 100 fish per day in Sept. See gear restrictions (C.2). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure. In 2004 the season will open March 1 for all salmon except coho. This opening could be modified following Council review at its November 2003 meeting.	**Humbug Mt. to OR/CA Border** • March 15 through May 31. All salmon except coho. See gear restrictions (C.2). • June 1 through earlier of June 30 or 3,000 chinook quota; • July 1 through earlier of July 31 or 1,100 chinook quota; • Aug. 1 through earlier of Aug. 29 or 3,000 chinook quota; • Sept. 1 through earlier of Sept. 30 or 4,000 chinook quota with a chinook 30 inch minimum size limit. No transfer of remaining quota from earlier fisheries allowed. All salmon except coho (C.8). Possession and landing limit of 50 fish per day per vessel prior to Sept. 1; 100 fish per day per vessel in Sept. See gear restrictions (C.2). All salmon must landed and delivered to Gold Beach, Port Orford, or Brookings, and within 24 hours of closure. In 2004, same as Option I.	**Humbug Mt. to OR/CA Border** Same as Option I. In 2004, the season will open March 15 for all salmon except coho. This opening could be modified following Council review at its November 2003 meeting.
OR/CA Border to Humboldt South Jetty • Sept. 1 through earlier of Sept. 30 or 10,000 chinook quota. All salmon except coho. Possession and landing limit of 40 fish per day. All fish caught in this area must be landed within the area. See gear restrictions (C.2). Klamath Control Zone closed (C.4.).	**OR/CA Border to Humboldt South Jetty** Same as Option I.	**OR/CA Border to Humboldt South Jetty** Same as Option I.
Horse Mt. to Pt. Arena (Fort Bragg) • May 1 through May 31 and July 17 through Sept. 30. All salmon except coho. See gear restrictions (C.2).	**Horse Mt. to Pt. Arena (Fort Bragg)** • May 1 through May 31, July 1 through Aug. 30, and Sept. 1 through Sept. 30. All salmon except coho. July 1 - 31, possession and landing limit of 150 fish per day per vessel and all fish caught in this area must be landed within the area. See gear restrictions (C.2).	**Horse Mt. to Pt. Arena (Fort Bragg)** • May 1 through May 31 and July 1 through Sept. 30. All salmon except coho. July 1 through July 31, possession and landing limit of 100 fish per day per vessel and all fish caught in this area must be landed within the area. See gear restrictions (C.2).

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
Pt. Arena to U.S./Mexico Border • May 1 through Sept. 30. All salmon except coho. Chinook minimum size limit 26 inches. See gear restrictions (C.2).	**Pt. Arena to U.S./Mexico Border** Same as Option I.	**Pt. Arena to U.S./Mexico Border** Same as Option I.
Pt. Reyes to Pigeon Pt. (Fall Area Target Zone) • Oct. 1 through Oct. 17, Monday through Friday. Inside 3 nautical miles. All salmon except coho. Chinook minimum size limit 26 inches. See gear restrictions (C.2).	**Pt. Reyes to Pigeon Pt. (Fall Area Target Zone)** Same as Option I	**Pt. Reyes to Pigeon Pt. (Fall Area Target Zone)** Same as Option I

B. MINIMUM SIZE (Inches)

	Chinook		Coho		
Area (when open)	Total Length	Head-off	Total Length	Head-off	Pink
North of Cape Falcon	28.0	21.5	16.0	12.0	None
South of Cape Falcon	26.0[a/]	19.5[a/]	-	-	None
Cape Falcon to Humbug Mt.					
Option II and III - May 1 - Aug. 31	27.0[a/]	20.5[a/]	-	-	None
Option III Oct. 1 -31.	28.0[a/]	21.5[a/]	-	-	None
Humbug Mt. to OR/CA Border Sept.	30.0		-	-	None

a/ Chinook not less than the minimum size limit in place for fish taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions:

a. Single point, single shank barbless hooks are required in all fisheries.

b. *Cape Falcon, Oregon to the Oregon/California border*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

c. *Oregon/California border to U.S./Mexico border:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle.

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll gear in the water while transiting any area closed to salmon fishing while possessing salmon; however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone*: **Options I and II** - The area from Cape Flattery (48˚23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to 48˚15'00" N lat. and west of 125˚05'00" W long.
Option III - The area from Cape Flattery (48˚ 23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to 48˚10'00" N lat. and west of 125˚05'00" W long.

b. *Columbia Control Zone* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N lat., 124°06'50" W long.) and the green lighted Buoy #7 (46°15'09' N lat., 124°06'16" W long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N lat.,124°03'07" W long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N lat., 124°05'20" W long.), and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N lat., 124°04'05" W long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival.

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone: 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone: 800-662-9825). ODFW and WDFW will monitor landings. If the landings are

Box for printing page numbers on landscape pages is in this document (see reveal codes)projected to exceed the 39,300 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

Option 1a: License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip. Halibut retained must be no less than 32 inches in total length (with head on).

Option 1b: License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 25 halibut may be landed per trip. Halibut retained must be no less than 32 inches in total length (with head on).

Option 2: Designate the "C-shaped" yelloweye rockfish conservation area, as defined in the Pacific Council Halibut Catch Sharing Plan in the North Coast subarea (WA marine area 3), as an area to be avoided for salmon troll fishing to provide protection of yelloweye rockfish.

NOTE: Option 2 may be combined with either Option 1a or 1b.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. Chinook remaining from the May-June quota may be transferred to the July-September quota on a fishery impact equivalent basis.

b. At the March 2004 meeting, the Council will consider inseason recommendations for special regulations for any experimental April fisheries (proposals must meet Council protocol and be received in November 2003).

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

TABLE A-3b: 2003 Recreational management options (other alternatives).

A. SEASON OPTION DESCRIPTIONS

OPTION I North of Cape Falcon	OPTION II North of Cape Falcon	OPTION III North of Cape Falcon
Supplemental Management Information: 1. Overall non-Indian TAC: 124,000 chinook and 300,000 coho Trade: May be considered at the April Council meeting. 2. Recreational TAC: 59,600 chinook and 225,000 marked hatchery coho. 3. Area 4B add-on fishery of 0 coho (chinook nonretention). 4. Buoy 10 fishery opens Aug. 1 with an expected landed catch of 45,500 coho in Aug. and 24,500 coho in Sept. 5. All retained coho must have a healed adipose fin clip.	**Supplemental Management Information:** 1. Overall non-Indian TAC: 115,000 chinook and 250,000 coho Trade: May be considered at the April Council meeting. 2. Recreational TAC: 56,000 chinook and 187,500 marked hatchery coho. 3. Area 4B add-on fishery of 0 coho (chinook nonretention) 4. Buoy 10 fishery opens Aug. 1 with an expected landed catch of 48,750 coho in Aug. and 26,250 coho in Sept. 5. All retained coho must have a healed adipose fin clip.	**Supplemental Management Information:** 1. Overall non-Indian TAC: 95,000 chinook and 200,000 coho Trade: May be considered at the April Council meeting. 2. Recreational TAC: 47,500 chinook and 150,000 marked hatchery coho. 3. Area 4B add-on fishery of 6,000 coho opens upon ocean closure (C.5). Chinook retention in July only. 4. Buoy 10 fishery opens Aug. 1 with an expected landed catch of 52,000 coho in Aug. and 28,000 coho in Sept. 5. All retained coho must have a healed adipose fin clip. 6. Overall Chinook TACs may need to be reduced or fisheries adjusted upon conclusion of NMFS ESA consultation for the Puget Sound Chinook Harvest Resource Management Plan.
U.S./Canada Border to Cape Alava (Neah Bay) • June 29 through earlier of Sept. 30 or 23,400 coho subarea quota with a subarea guideline of 3,900 chinook. All salmon, 7 days per week, 2 fish per day plus one additional pink salmon, no more than one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Chinook non-retention east of the Bonilla-Tatoosh line (C.3.c) during Council managed ocean fishery. Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).	**U.S./Canada Border to Cape Alava (Neah Bay)** • June 22 through earlier of Sept. 14 or 19,500 coho subarea quota with a subarea guideline of 3,800 chinook. All salmon 7 days per week, 2 fish per day plus one additional pink salmon, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Chinook non-retention east of the Bonilla-Tatoosh line (C.3.c) during Council managed ocean fishery. Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).	**U.S./Canada Border to Cape Alava (Neah Bay)** • June 29 through earlier of Sept.30 or 14,490 coho subarea quota (adjusted for Area 4B add-on) with a subarea guideline of 3,800 chinook. All salmon, 7 days per week, 2 fish per day, only one of which may be a chinook (chinook 28-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Chinook non-retention east of the Bonilla-Tatoosh line (C.3.c) during Council managed ocean fishery except chinook retention allowed in July. Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
Cape Alava to Queets River (La Push) • June 29 through earlier of Sept. 30 or 5,850 coho subarea quota with a subarea guideline of 2,400 chinook. All salmon, 7 days per week, 2 fish per day plus one additional pink salmon, no more than one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).	**Cape Alava to Queets River (La Push)** • June 22 through earlier of Sept. 14 or 4,775 coho subarea quota with a subarea guideline of 2,200 chinook; • Sep. 20 through Oct. 5 or 100 coho quota or 100 chinook quota: Inside area defined by a line from Teahwhit Head northwesterly to "Q" buoy to Cake Rock then true east to the shoreline (C.5). All salmon, 7 days per week, 2 fish per day plus one additional pink salmon, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).	**Cape Alava to Queets River (La Push)** • June 29 through earlier of Sept.30 or 3,975 coho subarea quota with a subarea guideline of 2,000 chinook. All salmon, 7 days per week, 2 fish per day, only one of which may be a chinook (chinook 28-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).
Queets River to Leadbetter Pt. (Westport) • June 29 through earlier of Sept. 30 or 83,250 coho subarea quota with a subarea guideline of 40,600 chinook. Sun. through Thurs. All salmon, 2 fish per day, no more than one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).	**Queets River to Leadbetter Pt. (Westport)** • June 22 through earlier of Sept. 14 or 69,375 coho subarea quota with a subarea guideline of 38,800 chinook. Sun. through Thurs. All salmon, 2 fish per day, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).	**Queets River to Leadbetter Pt. (Westport)** • June 29 through earlier of Sept. 30 or 56,535 coho subarea quota with a subarea guideline of 32,600 chinook. Sun. through Thurs. All salmon, 2 fish per day, only one of which may be a chinook (chinook 28-inch minimum size limit). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon(C.4).

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
Leadbetter Pt. to Cape Falcon (Columbia River) • June 29 through earlier of Sept. 30 or 112,500 coho subarea quota with a subarea guideline of 12,700 chinook. Sun. through Thurs. prior to Aug. 16, 7 days per week beginning Aug. 16. All salmon. 2 fish per day, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Columbia Control Zone closed (C.3.a). Closed between Cape Falcon and Tillamook Head beginning Aug.1. Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).	**Leadbetter Pt. to Cape Falcon (Columbia River)** • July 6 through earlier of Sept. 30 or 93,750 coho subarea quota with a subarea guideline of 11,100 chinook. Sun. through Thurs. A conference call will be scheduled for a day no later than August 6 to discuss opening 7 days per week. All salmon. 2 fish per day, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Columbia Control Zone closed (C.3.a). Closed between Cape Falcon and Tillamook Head beginning Aug.1. Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon (C.4).	**Leadbetter Pt. to Cape Falcon (Columbia River)** • July 6 through earlier of Sept. 30 or 75,000 coho subarea quota with a subarea guideline of 9,100 chinook. Sun. through Thurs. All salmon. 2 fish per day, only one of which may be a chinook (chinook 26-inch minimum size limit) (B). All retained coho must have a healed adipose fin clip. See gear restrictions (C.2). Columbia Control Zone closed (C.3.a). Closed between Cape Falcon and Tillamook Head beginning Aug.1. Inseason management may be used to sustain season length and keep harvest within the overall chinook recreational TAC for north of Cape Falcon.

A. SEASON OPTION DESCRIPTIONS

OPTION I South of Cape Falcon	OPTION II **South of Cape Falcon**	OPTION III South of Cape Falcon
Cape Falcon to Humbug Mt. • Except as provided below during the selective fishery, the season will be: Mar. 15 through Oct. 31 (C.5). All salmon except coho. 2 fish per day. See gear restrictions (C.2.). See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay.	**Cape Falcon to Humbug Mt** • Same as Option I	**Cape Falcon to Humbug Mt** • Same as Option I
In 2004 the season will open March 15 for all salmon except coho. 2 fish per day. Same gear restrictions as in 2003. This opening could be modified following Council review at its November 2003 meeting.	In 2004, same as Option I.	In 2004, same as Option I.
Selective fishery: • June 21 through earlier of Aug. 24 or a landed catch of 88,000 coho. 7 days per week. All salmon. 2 fish per day. All retained coho must have a healed adipose fin clip. Open days may be adjusted inseason to utilize the available quota (C.4). All salmon except coho season reopens the earlier of Aug. 25 or attainment of the coho quota.	Selective fishery: • June 27 through earlier of Aug. 10 or a landed catch of 75,000 coho. 7 days per week. All salmon. 2 fish per day. All retained coho must have a healed adipose fin clip. Open days may be adjusted inseason to utilize the available quota (C.4). All salmon except coho season reopens the earlier of Aug. 11 or attainment of the coho quota.	Selective fishery: • June 28 through earlier of Aug. 3 or a landed catch of 60,000 coho. 7 days per week. All salmon. 2 fish per day. All retained coho must have a healed adipose fin clip. Open days may be adjusted inseason to utilize the available quota (C.4). All salmon except coho season reopens the earlier of Aug. 4 or attainment of the coho quota.
Humbug Mt. to Horse Mt. (KMZ) •May 17 through Sept. 14. All salmon except coho. 7 days per week, 2 fish per day. See gear restrictions (C.2). Klamath Control Zone closed (C.3.b).	**Humbug Mt. to Horse Mt. (KMZ)** • May 17 through July 10 and July 21 through Sept. 14. All salmon except coho. 7 days per week, 2 fish per day. See gear restrictions (C.2). Klamath Control Zone closed (C.3.b).	**Humbug Mt. to Horse Mt. (KMZ)** • May 17 through July 5 and July 26 through Sept. 14. All salmon except coho. 7 days per week, 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions (C.2). Klamath Control Zone closed (C.3.b).

A. SEASON OPTION DESCRIPTIONS

OPTION I	OPTION II	OPTION III
Horse Mt. to Pt. Arena (Fort Bragg) •Feb. 15 through Nov. 16. All salmon except coho. 2 fish per day. Chinook minimum size 24 inches through April 30 and 20 inches thereafter (B). See gear restrictions (C.2).	**Horse Mt. to Pt. Arena (Fort Bragg)** • Same as Option I.	**Horse Mt. to Pt. Arena (Fort Bragg)** • Same as Option I.
In 2004, season opens Feb. 14 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, chinook 24-inch minimum size limit through April 30; same gear restrictions as in 2003.	In 2004, same as Option I.	In 2004, same as Option I.
Pt. Arena to Pigeon Pt. •Apr. 12 through Nov. 9. All salmon except coho. 2 fish per day. Chinook minimum size limit 24 inches through April 30 and 20 inches thereafter (B). See gear restrictions (C.2).	**Pt. Arena to Pigeon Pt.** • Same as Option I	**Pt. Arena to Pigeon Pt.** • Same as Option I
In 2004, the season will open Apr. 17 for all salmon except coho. 2 fish per day, 24-inch minimum size limit and the same gear restrictions as in 2003. This opening could be modified to allow an earlier opening date following Council review at its November 2003 meeting.	In 2004, same as Option I.	In 2004, same as Option I.
Pigeon Pt. to U.S./Mexico Border •Mar. 29 through Sept. 28. All salmon except coho. 2 fish per day. Chinook minimum size limit 24 inches through April 30 and 20 inches thereafter (B). See gear restrictions (C.2).	**Pigeon Pt. to U.S./Mexico Border** • Same as Option I.	**Pigeon Pt. to U.S./Mexico Border** • Same as Option I.
In 2004, the season will open Apr. 3 for all salmon except coho. 2 fish per day, chinook 24-inch minimum size limit and the same gear restrictions as in 2003.	In 2004, same as Option I.	In 2004, same as Option I.

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)		Chinook	Coho	Pink
North of Cape Falcon:	Options I & II	26.0	16.0	None
	Option III*	28.0	16.0	None
Cape Falcon to Horse Mt.		20.0	16.0	None, except 20.0 off CA
Horse Mountain to Pt. Arena:	Prior to May 1	24.0	-	20.0
	Beginning May 1	20.0	-	20.0
South of Pt. Arena:	Prior to May 1	24.0	-	20.0
	Beginning May 1	20.0	-	20.0

* **Except**: Option III - 26.0 inches July 6 through Sept. 30 in the Leadbetter Point to Cape Falcon area.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. U.S./Canada Border to Pt. Conception, California: No more than one rod may be used per angler and single point, single shank barbless hooks are required for all fishing gear. [**Note:** ODFW regulations in the state-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.]

b. Cape Falcon, Oregon to Pt. Conception, California: Anglers must use no more than 2 single point, single shank barbless hooks.

c. Horse Mt., California to Pt. Conception, California: Single point, single shank, barbless **circle** hooks (below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle;

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

C.3. Control Zone Definitions:

a. Columbia Control Zone - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N latitude, 124°06'50" W longitude) and the green lighted Buoy #7 (46°15'09' N latitude, 124°06'16" W longitude); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N latitude, 124°03'07" W longitude to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N latitude, 124°05'20" W longitude) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N latitude, 124°04'05" W longitude), and then along the south jetty to the point of intersection with the Buoy #10 line.

b. Klamath Control Zone - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N latitude (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W longitude (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N latitude (approximately 6 nautical miles south of the Klamath River mouth).

c. The Bonilla-Tatoosh Line is defined as: A line running from the western end of Cape Flattery to Tatoosh Island Lighthouse (48˚23'30" N latitude, 124˚44'12" W longitude) to the buoy adjacent to Duntze Rock (48˚28'00" N latitude, 124˚45'00" W longitude), then in a straight line to Bonilla Point (48˚35'30" N latitude, 124˚43'00" W longitude) on Vancouver Island, B.C.

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas North of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.