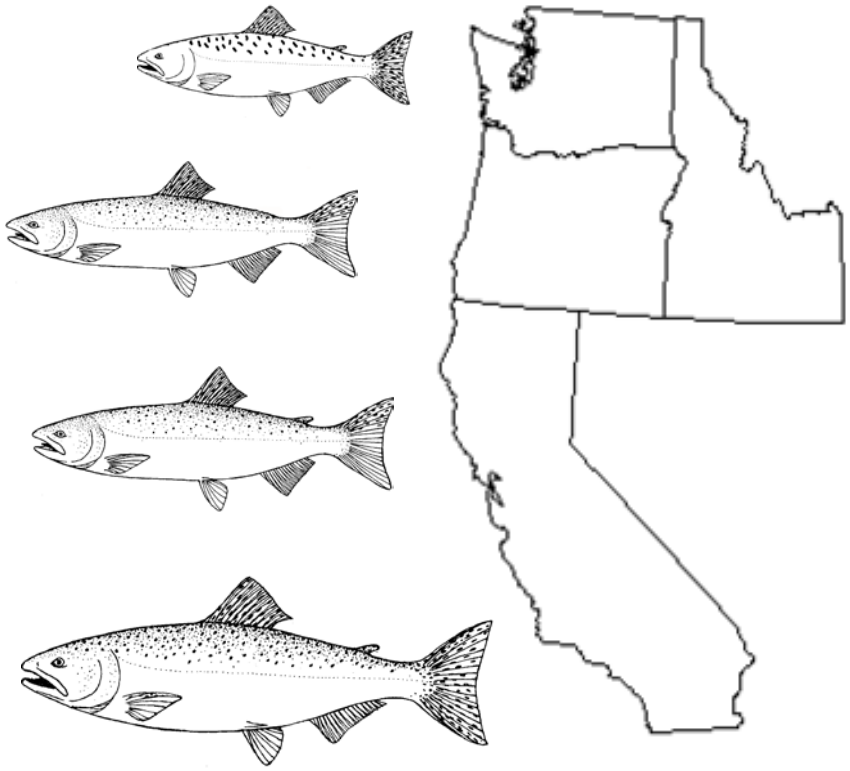
PRESEASON REPORT II

PROPOSED ALTERNATIVES
AND
ENVIRONMENTAL ASSESSMENT PART 2
FOR 2015
OCEAN SALMON FISHERY
REGULATIONS

REGULATION IDENTIFIER NUMBER 0648-XD843



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MARCH 2015

PUBLIC HEARINGS ON SALMON ALTERNATIVES

All Hearings Begin at 7 p.m.

Monday, March 30
Chateau Westport
Beach Room
710 W Hancock
Westport, WA 98595
(360) 268-9101

Monday, March 30
Red Lion Hotel
South Umpqua Room
1313 N Bayshore Drive
Coos Bay, OR 97420
(541) 267-4141

Tuesday, March 31
Motel 6
Convention Room
400 S. Main St.
Fort Bragg, CA 95437
(707) 964-4761

Public comment on the Alternatives will also be accepted during the April Council meeting on Saturday, April 11, during the public comment period for Agenda Item D.1 at the DoubleTree by Hilton Sonoma, One Doubletree Drive, Rohnert Park, CA 94928, phone: 707-584-5466. ***Written comments*** *received at the Council office* ***by midnight, on Thursday, April 2, 2015*** *will be distributed to all Council members.*

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A report of the Pacific Fishery Management Council pursuant to National Oceanic and Atmospheric Administration Award Number FNA10NMF4410014.

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LIST OF ACRONYMS AND ABBREVIATIONS

AABM	Aggregate Abundance Based Management
ABC	acceptable biological catch
ACL	annual catch limit
AEQ	adult equivalent
BO	biological opinion
CDFW	California Department of Fish and Wildlife
CFGC	California Fish and Game Commission
CO	central Oregon (Florence south jetty to Humbug Mt.)
Council	Pacific Fishery Management Council
CPUE	catch per unit effort
CWT	coded-wire tag
DPS	Distinct Population Segment
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ENSO	El Niño/Southern Oscillation
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FB	Fort Bragg (Horse Mt. to Point Arena)
FRAM	Fishery Regulation Assessment Model
FMA	fishery management area
FMP	fishery management plan
FONSI	finding of no significant impact
GSI	genetic stock identification
IPHC	International Pacific Halibut Commission
ISBM	Individual Stock Based Management
KC	California KMZ (OR/CA border to Horse Mountain)
KO	Oregon KMZ (Humbug Mountain to the OR/CA border
KMZ	Klamath Management Zone (the ocean zone between Humbug Mountain and Horse Mountain where management emphasis is on Klamath River fall Chinook)
KRFC	Klamath River fall Chinook
LCN	lower Columbia River natural (coho)
LCR	lower Columbia River (natural tule Chinook)
LRH	lower river hatchery (tule fall Chinook returning to hatcheries below Bonneville Dam)
LRW	Lower Columbia River wild fall Chinook, (bright fall Chinook returning primarily to the North Fork Lewis River).
MO	Monterey (Pigeon Point to the U.S./Mexico border)
NEPA	National Environmental Policy Act
MSA	Magnuson-Stevens Act
MSY	maximum sustainable yield
NMFS	National Marine Fisheries Service
NO	northern Oregon (Cape Falcon to Florence South Jetty)
NOAA	National Oceanic and Atmospheric Administration
ODFW	Oregon Department of Fish and Wildlife
OCN	Oregon coastal natural (coho)
OFL	overfishing limit
OLE	Office of Law Enforcement (NOAA)
OPI	Oregon Production Index
OSP	Oregon State Police
OY	optimum yield
PDO	Pacific (inter) Decadal Oscillation

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RER	rebuilding exploitation rate
RMP	Resource Management Plan
RK	Rogue/Klamath (hatchery coho)
S_{ACL}	annual catch limit spawner abundance
SCH	Spring Creek Hatchery (tule fall Chinook returning to Spring Creek Hatchery)
SEAK	Southeast Alaska
S_{MSY}	MSY spawning escapement
SET	spawning escapement target
SF	San Francisco (Point Arena to Pigeon Point)
SI	Sacramento Index
SONCC	Southern Oregon/Northern California Coast (coho ESU)
SRFC	Sacramento River fall Chinook
SRFI	Snake River fall (Chinook) Index
SRW	Snake River wild fall Chinook
SRWC	Sacramento River winter Chinook
STT	Salmon Technical Team
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
WCVI	West Coast Vancouver Island
WDFW	Washington Department of Fish and Wildlife

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1.0 INTRODUCTION

This document has been prepared by the staff of the Pacific Fishery Management Council (Council) and the Salmon Technical Team (STT) to describe the Council's proposed ocean salmon management Alternatives for 2015 and characterize their expected impacts on ocean salmon fisheries and the stocks which support them. The Council solicits public comments on the proposed management Alternatives in preparation for adopting final management recommendations at its April meeting. Oral and written comments may be presented at public hearings at the times and locations displayed on the inside front cover of this report. Additional comment will be accepted during the April Council meeting at the Hilton Sonoma, One Doubletree Drive, Rohnert Park, California. Written comments received at the Council office by April 2, 2015 will be copied and distributed to all Council members (Council staff cannot assure distribution of comments received after April 2, 2015).

This report also constitutes the second part of an Environmental Assessment (EA) to comply with National Environmental Policy Act (NEPA) requirements for the 2015 ocean salmon regulations. An EA is used to determine whether an action being considered by a Federal agency has significant environmental impacts. This part of the EA includes a statement of the purpose and need, a description of the affected environment, a description of 2015 ocean salmon regulation Alternatives being considered, and an analysis of the effects of those Alternatives on the affected environment. The first part of the EA (Preseason Report I; PFMC 2015b) included a description of the No-Action Alternative and an analysis of the effects of the No-Action Alternative on salmon stocks managed under the Pacific Coast Salmon Fishery Management Plan (FMP), which is one component of the affected environment. Along with the description and analysis of the Proposed Action in Preseason Report III (developed after the Council makes a final recommendation in April 2015), these three parts of the EA will provide the necessary components to determine if a finding of no significant impact (FONSI) or Environmental Impact Statement (EIS) is warranted.

1.1 Purpose and Need

The purpose of this action, implementation of the 2015 ocean salmon fishery management measures, is to allow fisheries to harvest surplus production of healthy natural and hatchery salmon stocks within the constraints specified under the Salmon FMP, the Pacific Salmon Treaty (PST), and consultation standards established for salmon stocks listed under the Endangered Species Act (ESA). In achieving this purpose, management measures must take into account the allocation of harvest among different user groups and port areas. Without this action, 2014 management measures would be in effect, which do not consider changes in abundance of stocks in the mixed stock ocean salmon fisheries. Therefore, this action is needed to ensure constraining stocks are not overharvested and that harvest of abundant stocks can be optimized to achieve the most overall benefit to the nation.

The Salmon FMP 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 and annual catch limits, specified ESA consultation or recovery standards, or Council adopted rebuilding plans.

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

3. Maintain ocean salmon fishing seasons that support established recreational and commercial fisheries, while meeting salmon harvest allocation objectives among ocean and inside recreational and commercial

fisheries that are fair and equitable, and in which fishing interests shall equitably share the obligations of fulfilling any treaty or other legal requirements for harvest opportunities.

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

5. Manage and regulate fisheries, so the OY 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 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 consultation standards 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 Fishery Conservation and Management Act (MSA) and the National Standards Guidelines.

2.0 SELECTION OF FINAL MANAGEMENT MEASURES

The Council's final ocean salmon season recommendations will be based on the range of Alternatives presented in this report and guidance received from deliberations at management fora such as the north of Cape Falcon planning process (sponsored by the States of Washington and Oregon and the treaty Indian tribes in that area), Pacific Salmon Commission (PSC), and from public hearings sponsored by the Council and the States of Washington, Oregon, and California. Final recommendations concerning season dates, catch quotas, and exploitation rates may vary from the range of Alternatives presented in this report depending upon determination of allocations, allowable harvest levels, public comment, or the final impact analyses completed by the STT. Elements of the Alternatives may be recombined to alter season patterns and quotas, or measures such as bag limits, days of fishing per week, special landing restrictions, and other specific regulatory details may also change. In addition, inseason modification of management measures may be used to ensure achievement of the Council's management objectives.

Specific details pertaining to season structure and special management measures for the treaty Indian troll fishery north of Cape Falcon are established in tribal regulations. Chinook and coho quota levels for the treaty Indian troll fishery may be adjusted if significant changes in incidental fishing mortality result from tribal regulations, preseason or inseason.

The impact analyses presented in this document reflect uncertainties and limitations of information available at the time of the March 2015 Council meeting. At this point in the planning cycle, the STT's impact assessments reflect four key assumptions relative to stocks impacted by Canadian and Alaskan fisheries: (1) abundance levels for Canadian Chinook and coho stocks identical to 2014 forecasts; (2) fishing

effort for southeast Alaskan (SEAK), north-central British Columbia, and West Coast Vancouver Island (WCVI) fisheries equal to the levels under the 2014 catch ceilings established under the aggregate abundance based management (AABM) provisions of the 2009 PST Agreement ; (3) minimum size limits identical to those in place for 2014; (4) 2014 preseason fishing effort and size limits for Canadian fisheries operating under individual stock based management (ISBM) regimes pursuant to the 2009 PST Agreement; and (5) base packages for management of Southern U.S. inside fisheries from 2014 fisheries. In mid-March, U.S. and Canadian fishery managers will exchange information regarding preseason expectations for fisheries and the status of Chinook and coho stocks. Following this exchange, the PSC's Chinook Model will be calibrated by the PSC Chinook Technical Committee to determine the allowable catch ceilings under the 2009 PST Agreement. Abundances and fishery expectations will be adjusted in the Council's fishery planning models prior to the April Council meeting, and inside fisheries will be shaped by state and tribal co-managers both prior to and during the April Council meeting.

Any Alternative considered for adoption that deviates from Salmon FMP objectives or other applicable laws will require implementation by emergency rule. If an emergency rule appears to be necessary, the Council must clearly identify and justify the need for such an action consistent with emergency criteria established by the Council and NMFS.

3.0 SALMON TECHNICAL TEAM CONCERNS

3.1 Need for Landing Requirements

The STT recommends that landing restrictions be employed to require landings within the area where the fish are caught. Unless such restrictions are adopted, fleet mobility increases the difficulty of inseason management by compromising catch accountability and interpretation of biological data such as genetic stock identification (GSI) samples or coded-wire tag (CWT) recoveries.

4.0 SALMON FISHERY MANAGEMENT PLAN REQUIREMENTS

The Council's Salmon FMP includes objectives for setting annual management measures to regulate ocean salmon fisheries between the U.S./Canada border and the U.S./Mexico border. The objectives include biological, administrative, and allocation requirements. In recommending final management measures, the Council attempts to meet all objectives in a fair and balanced manner, while maintaining established priorities.

Biological objectives for stocks originating in the Council area and impacted by Council area ocean fisheries are listed in Table 3-1 of the Salmon FMP. The objectives generally consist of meeting spawning escapement numbers associated with maximum sustainable yield (S_{MSY}), overfishing limits (OFL), acceptable biological catch (ABC), and annual catch limits (ACL), or exploitation rate limits designed to support recovery of depressed stocks or to rebuild overfished stocks, while encompassing a long term average harvest approximating MSY.

Administrative objectives are requirements for meeting other applicable law outside of the Salmon FMP. These requirements include ESA consultation standards, international treaties, and tribal trust responsibilities. The Salmon FMP defers to NMFS consultation standards for salmon stocks listed under the ESA in regard to biological conservation objectives. Section 5.0 of this document provides greater detail on ESA listed stocks, while impacts of the Council adopted salmon management measures on ESA listed stocks are included in Table 5.

The Salmon FMP requires compliance with relevant terms of the PST. Section 6.0 of this document provides greater detail on PST provisions and stocks, while impacts of the Council adopted salmon management measures on those stocks are included in Table 5.

Treaty trust responsibilities of the Salmon FMP require the Council to abide by Court orders in the *U.S. v. Washington* (Puget Sound), *Hoh v. Baldrige* (Washington coast), and *U.S. v. Oregon* (Columbia River) cases, and the Solicitor General opinion (Klamath River) governing allocation and management of shared salmon resources. Much of the North of Falcon forum is dedicated to annual negotiations establishing allocation among the tribes, non-Indian fishing sectors, and ocean and inside interests. The results of these negotiations allow the Council to complete final management measure recommendations while meeting its biological, administrative, and allocation objectives.

The Columbia River treaty tribes establish periodic management agreements with the state co-managers and Federal agencies. These agreements are approved pursuant to provisions of *U.S. v. Oregon* procedures. Recent agreements have included an entitlement for the treaty tribes of 50 percent of the coho return destined for areas upstream from Bonneville Dam. Council area fisheries are shaped in order to meet this requirement in some years.

The Yurok and Hoopa Valley tribes are entitled to 50 percent of the total Klamath River fall Chinook (KRFC) harvest, which is calculated as a harvest of KRFC equal to that taken in all non-Indian fisheries. The Council must account for all harvest impacts when assessing the achievement of KRFC conservation objectives.

In addition to the allocation objectives associated with sharing between treaty Indian and non-Indian sectors, the Salmon FMP includes formulas for sharing Chinook and coho quotas north of Cape Falcon between commercial and recreational sectors, and among recreational port subareas, and for coho south of Cape Falcon between commercial and recreational sectors. Alternatives for the 2015 salmon management measures adopted by the Council meet the allocation requirements for fisheries north of Cape Falcon in the Salmon FMP. There are insufficient coho available for directed commercial harvest south of Cape Falcon; therefore, the FMP allocation schedule guidance is to determine allocation during the preseason process.

5.0 SPECIES LISTED UNDER THE ENDANGERED SPECIES ACT

Since 1989, NMFS listed the following 17 Evolutionarily Significant Units (ESUs) of salmon under the ESA:

		Federal Register Notice			
ESU	Status	Most Recent		Original Listing	
Chinook					
Sacramento River Winter	Endangered	76 FR 50447	8/15/2011	54 FR 32085	8/1/1989
Snake River Fall	Threatened	76 FR 50448	8/15/2011	57 FR 14653	4/22/1992
Snake River Spring/Summer	Threatened	76 FR 50448	8/15/2011	57 FR 14653	4/22/1992
Puget Sound	Threatened	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
Low er Columbia River	Threatened	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
Upper Willamette River	Threatened	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
Upper Columbia River Spring	Endangered	76 FR 50448	8/15/2011	64 FR 14308	3/24/1999
Central Valley Spring	Threatened	76 FR 50447	8/15/2011	64 FR 50394	9/16/1999
California Coastal	Threatened	76 FR 50447	8/15/2011	64 FR 50394	9/16/1999
Chum					
Hood Canal Summer-Run	Threatened	76 FR 50448	8/15/2011	64 FR 14508	3/25/1999
Columbia River	Threatened	76 FR 50448	8/15/2011	64 FR 14508	3/25/1999
Coho					
Central California Coastal	Endangered	76 FR 50447	8/15/2011	61 FR 56138	10/31/1996
S. Oregon/ N. California Coastal	Threatened	76 FR 50447	8/15/2011	62 FR 24588	5/6/1997
Oregon Coastal	Threatened	76 FR 50448	8/15/2011	63 FR 42587	8/10/1998
Low er Columbia River	Threatened	76 FR 50448	8/15/2011		
Sockeye					
Snake River	Endangered	76 FR 50448	8/15/2011	56 FR 58619	11/20/1991
Ozette Lake	Threatened	76 FR 50448	8/15/2011	64 FR 14528	3/25/1999

As the listings have occurred, NMFS has initiated formal consultations and issued biological opinions (BOs) that consider the impacts resulting from implementation of the Salmon FMP, or from annual management measures, to listed salmonid species. NMFS has also reinitiated consultation on certain ESUs when new information has become available on the status of the stocks or on the impacts of the Salmon FMP on the stocks. The consultation standards referred to in this document include (1) reasonable and prudent alternatives, (2) conservation objectives for which NMFS conducted Section 7 consultations and arrived at a no-jeopardy conclusion, and (3) NMFS requirements under Section 4(d) determinations.

A list of current BOs in effect, the species they apply to, and their duration follows:

Date	Evolutionarily Significant Unit covered and effective period
3/8/1996	Snake River spring/summer and fall Chinook and sockeye (until reinitiated)
4/28/1999	Oregon Coastal natural coho, Southern Oregon/ Northern California coastal coho, Central California coastal coho (until reinitiated)
4/28/2000	Central Valley spring Chinook (until reinitiated)
4/27/2001	Hood Canal summer chum 4(d) limit (until reinitiated)
4/30/2001	Upper Willamette Chinook, Upper Columbia spring Chinook, Lake Ozette sockeye, Columbia River chum, and 10 steelhead ESUs (until reinitiated)
4/30/2010	Sacramento River winter Chinook (until reinitiated)
4/30/2004	Puget Sound Chinook (until reinitiated)
6/13/2005	California coastal Chinook (until reinitiated)
4/28/2008	Lower Columbia River natural coho (until reinitiated)
4/26/2012	Lower Columbia River Chinook (until reinitiated)

Amendment 12 to the Salmon FMP added the generic category “species listed under the ESA” to the list of stocks in the salmon management unit and modified respective escapement goals to include “manage consistent with NMFS jeopardy standards or recovery plans to meet immediate conservation needs and

long-term recovery of the species." Amendment 14 specified those listed ESUs and clarified which stocks in the FMP management unit were representative of the ESUs.

In a letter received by the Council on March 3, 2015, NMFS provided guidance on protective measures for species listed under the ESA during the 2015 fishing season. The letter summarized the requirements of NMFS' BOs on the effects of potential actions under the salmon FMP on listed salmon and provided the anticipated consultation standards of the BOs in preparation for the 2015 management season, as well as further guidance and recommendations for the 2015 management season.

The ESA consultation standards, exploitation rates, and other criteria in place for the 2015 management season are presented in Table 5. Some listed stocks are either rarely caught in Council fisheries (e.g., spring Chinook from the upper Columbia River) or already receive sufficient protection from other salmon FMP and ESA standards (e.g., Central Valley spring Chinook). NMFS has determined that management actions designed to limit catch from these ESUs, beyond what will be provided by harvest constraints for other stocks, are not necessary.

Of the listed Chinook and coho, Council-managed fisheries have a substantive impacts on Sacramento River winter Chinook (SRWC), Central Valley spring Chinook, California coastal Chinook, Snake River wild (SRW) fall Chinook, lower Columbia River (LCR) fall Chinook, and all of the coho stocks. Additional listed salmonid ESUs found within the Council area, but not substantively impacted by Council managed fisheries, include:

Chinook	
Snake River spring/summer (threatened)	Puget Sound (threatened)
Upper Willamette (threatened)	Upper Columbia River spring (endangered)
Sockeye	
Snake River (endangered)	Ozette Lake Sockeye (threatened)
Chum	
Columbia River (threatened)	Hood Canal summer (threatened)
Steelhead	
Southern California (endangered)	Central Valley, California (threatened)
South-central California coast (threatened)	Central California coast (threatened)
Upper Columbia River (endangered)	Upper Willamette River (threatened)
Middle Columbia River (threatened)	Lower Columbia River (threatened)
Snake River Basin (threatened)	Northern California (threatened)
Puget Sound (threatened)	

6.0 OBLIGATIONS UNDER THE PACIFIC SALMON TREATY

In 1985 the PST was signed, setting long-term goals for the benefit of the shared salmon resources of the United States and Canada. The PSC is the body formed by the governments of Canada and the United States to implement the Pacific Salmon Treaty.

6.1 Chinook Salmon Management

A new agreement under the PST was negotiated in 2008 and formally accepted by both the U.S. and Canada in December of 2008. This new agreement took effect on January 1, 2009, and includes a 30 percent reduction in the catch ceilings for AABM fisheries off the West Coast Vancouver Island and a 15 percent reduction in the catch ceilings for AABM fisheries in Southeast Alaska Chinook relative to the catch ceilings in effect for these fisheries since 1999. Under the terms of the 2009 PST Agreement, Council fisheries for Chinook salmon continue to be subject to the ISBM provisions of Annex 4, Chapter 3, adopted in 1999. These provisions require the combined adult equivalent (AEQ) exploitation rate by all U.S. fisheries south of the U.S./Canada border be reduced by 40 percent from the 1979-1982 base period for a specified set of Chinook indicator stocks, substantively impacted in U.S. ISBM fisheries, if they do not achieve their management objectives.

Many Chinook stocks of concern to the Council are affected by fisheries off Canada and Alaska. Maximum allowable catches by AABM fishery complexes off the WCVI, Northern British Columbia, and Southeast Alaska are determined through the annual calibration of the PSC Chinook Model. Canadian fisheries that are not included in AABM complexes are managed under ISBM constraints, which require a 36.5 percent reduction in AEQ exploitation rates relative to the 1979-1982 base period on specified Chinook indicator stocks that do not achieve their management objectives. Expectations for Canadian and Alaskan fisheries harvest and stock abundance forecasts are incorporated into the Chinook Fishery Regulation Assessment Model (FRAM) to estimate total exploitation rate impacts from all marine fisheries (Table 5).

Key considerations for Canadian domestic fishery management for Chinook in 2015 include, (1) meeting domestic conservation obligations for WCVI, Strait of Georgia, and Fraser River spring stocks; (2) Chinook harvests by native fisheries; and (3) incidental impacts during commercial and native fisheries directed at sockeye, and chum salmon. It is anticipated that the details of the fishery regulatory package off WCVI will be driven by levels of allowable impact on WCVI and Lower Strait of Georgia Chinook and Interior Fraser (Thompson River) coho.

6.2 Coho Salmon Management

In 2002, the PSC adopted a management plan for coho salmon originating in Washington and Southern British Columbia river systems. The plan is directed at the conservation of key management units, four from Southern British Columbia (Interior Fraser, Lower Fraser, Strait of Georgia Mainland, and Strait of Georgia Vancouver Island) and nine from Washington (Skagit, Stillaguamish, Snohomish, Hood Canal, Strait of Juan de Fuca, Quillayute, Hoh, Queets, and Grays Harbor). Exploitation rate limits for intercepting fisheries are established for individual management units through formulas specified in the 2002 PST Southern Coho Management Plan, and are based on total allowable fishery exploitation rates.

The categorical status of U.S. coho management units is reported to comply with obligations pursuant to the 2002 PST Southern Coho Management Plan. Categorical status is employed by the PSC under the 2002 PST Southern Coho Management Plan to indicate general ranges of allowable total exploitation rates for U.S. and Canadian coho management units. Three categories are employed: low (total exploitation rate less than 20 percent), moderate (total exploitation rate 20 percent to 40 percent), and abundant (total exploitation rate greater than 40 percent). For the Puget Sound management units, the 2002 PST Southern Coho Management Plan uses the thresholds and stepped harvest rate goals from the Comprehensive Coho Agreement, developed by Washington and the Puget Sound tribes, and adopted by the Council as FMP

conservation objectives in November 2009. Actual exploitation rate constraints for Canadian fisheries on U.S. coho management units are determined by formulas that specify sharing of allowable exploitation rates and a "composite rule." The composite rule adjusts constraints for Canadian fishery exploitation rates based on the number of U.S. management units which fall in a given category. For example, if only one Washington coastal coho management unit is in low status, Canadian fisheries are constrained to a total exploitation rate on that unit of 12 percent; if two or more Washington coastal management units are in low status, the constraint becomes 10 percent. The most restrictive exploitation rate limit for Canadian fishery impacts on U.S. coho management units is 10 percent.

For Washington coastal coho management units, a range is reported for the allowable exploitation rates based on the relationship between the pre-season abundance forecast and the upper and lower values of the spawning escapement ranges corresponding to MSY production. Maximum exploitation rates are computed using the lower end of the escapement range and minimum exploitation rates are computed using the upper end of the escapement range. For purposes of reporting the categorical status, an allowable exploitation rate is computed using the mid-point of the MSY escapement range. However, the maximum allowable exploitation rate allowed under the PST is 65 percent.

For 2015, Puget Sound and Washington coast coho constraints are as follows:

FMP

FMP Stock	Total Exploitation Rate Constraint[a/]	Categorical Status[a/]
Skagit	60%	Normal
Stillaguamish	50%	Normal
Snohomish	60%	Normal
Hood Canal	65%	Normal
Strait of Juan de Fuca	20%	Critical
Quillayute Fall	59%	
Hoh	65%	
Queets	65%	
Grays Harbor	65%	

PST Southern Coho Management Plan

U.S. Management Unit	Total Exploitation Rate Constraint[b/]	Categorical Status[c/]
Skagit	60%	Abundant
Stillaguamish	50%	Abundant
Snohomish	60%	Abundant
Hood Canal	65%	Abundant
Strait of Juan de Fuca	20%	Low
Quillayute Fall[c/]		Low
Hoh[c/]		Moderate
Queets[c/]		Low
Grays Harbor		Abundant

a/ Preliminary. For Puget Sound stocks, the exploitation rate constraints and categorical status (Normal, Low, Critical) reflect application of Comprehensive Coho Agreement rules, as adopted in the FMP. For Washington Coast stocks, exploitation rate constraints represent MFMT. Note that under *U.S. v. Washington* and *Hoh v. Baldrige* case law, the management objectives can differ from FMP objectives provided there is an annual agreement among the state and tribal comanagers; therefore, the exploitation rates used to report categorical status do not necessarily represent maximum allowable rates for these stocks.

b/ Preliminary. For Puget Sound and Washington Coast management units, the exploitation rate constraints reflect application of the 2002 PST Southern Coho Management Plan.

c/ Categories (Abundant, Moderate, Low) correspond to the general exploitation rate ranges depicted in paragraph 3(a) of the 2002 PST Southern Coho Management Plan. For Washington Coast stocks, categorical status is determined by taking the midpoint of the range of exploitation rates associated with achieving the escapement goal ranges. The exploitation rate ranges are based on preseason abundance forecasts and the upper and lower ends of the escapement goal ranges. Maximum exploitation rates are computed using the lower end of the escapement range; minimum exploitation rates are computed using the upper end of the escapement range.

Key considerations for Canadian fishery management for coho in 2015 are expected to include, (1) meeting domestic conservation obligations for Interior Fraser (including Thompson River) coho; (2) coho harvests by First Nations fisheries; (3) incidental impacts during commercial and First Nations fisheries directed at pink, Chinook, sockeye, and chum salmon; and (4) the desire to provide increased opportunity for sport fisheries through mark-selective retention regulations. The Canadian fishery regimes affecting coho are expected to be driven by Canadian domestic allowable impacts on the Thompson River component of the Interior Fraser management unit.

In previous years, prior to 2014, Canadian fisheries were managed so as not to exceed a three percent maximum exploitation rate. In May 2014, Canada decided to permit up to a 16% exploitation rate on upper Fraser coho in Canadian fisheries to allow for impacts in fisheries directed at a record Fraser sockeye forecast. The projected status of Canadian coho management units in 2015 indicates continuing concerns for the condition of Interior Fraser coho. Absent a large sockeye forecast this year, the Interior Fraser coho management unit is anticipated to remain in low status, resulting in a requirement to constrain the total mortality fishery exploitation rate for 2015 Southern U.S. fisheries to a maximum of 10.0 percent.

7.0 DESCRIPTION OF THE ALTERNATIVES

Detailed information on the proposed ocean salmon regulation Alternatives are presented in Tables 1 (non-Indian commercial), 2 (recreational), and 3 (treaty Indian). Significant changes from recent seasons are highlighted below.

7.1 Commercial

Alternatives for the area north of Cape Falcon reflect a lower relative total abundance of Chinook but higher abundance of Spring Creek Hatchery Chinook and coho compared to 2014. In 2015, allowable catch of Chinook will likely be similar to 2014 due to a higher relative abundance of Spring Creek Hatchery Chinook, similar expected impacts in northern fisheries, and a total exploitation rate limit identical to 2014. Coho catch quotas will be lower than in 2014 due to slightly less abundant lower Columbia hatchery coho and lower abundance of Queets natural coho.

Two Alternatives north of Cape Falcon assign two-thirds of the troll Chinook quota to the May-June Chinook directed fishery; Alternative I assigns 60 percent to the May-June Chinook directed fishery and 40 percent to the summer all-species fishery. In Alternative I, the May-June fishery opens initially seven days per week with no landing and possession limit but with sub-quotas in the area north of the Queets River and in the area south of Leadbetter Point. In Alternative II, the fishery opens seven days per week with a weekly landing and possession limit in the area between Leadbetter Point and Cape Falcon and a sub-quota in the area north of the Queets River, and in Alternative III, the fishery opens five days per week with a coastwide open-period landing and possession limit and no area sub-quotas. The summer all-salmon fisheries for all Alternatives include Chinook and coho landing and possession limits; Chinook sub-quotas apply to the area north of the Queets River in Alternatives I and II. Coho retention regulations are similar to recent years, except that Alternative I includes a possible non-mark-selective period after September 1 if sufficient quota remains.

Commercial fisheries south of Cape Falcon will be constrained by the California coastal Chinook consultation standard under the ESA that limits the KRFC age-4 ocean harvest rate to a maximum of 16 percent and the exploitation rate limit on ESA listed LCR tule Chinook. Fisheries south of Point Arena, California, will also be constrained by the maximum allowable age-3 impact rate of 19.0 percent on ESA listed SRWC. The 2015 forecast of the Sacramento Index (SI) is sufficiently large such that Sacramento River fall Chinook (SRFC) will not constrain fisheries this year.

For the North and Central Oregon coast south of Cape Falcon, all Alternatives for Chinook fisheries open on April 1. The season end date is October 31 in Alternative I. Alternatives II and III include different season end dates in an attempt to avoid fall harvest of KRFC. These include an end date of September 30 under Alternative II and an end date of October 10 and fewer open days in September in Alternative III. Short closures exist between late-August and early-September for all Alternatives.

In the Klamath Management Zone (KMZ), the Oregon portion is open for April and May. Monthly quotas exist for June, July, and August with daily landing and possession limits. The California KMZ has monthly quotas for May through September in Alternative I, a single September quota in Alternative II, and is closed in Alternative III. For both the Oregon and California KMZ, the transfer of unused or exceeded quota to subsequent quota periods through August is allowed on an impact neutral basis.

In the Fort Bragg area the fishery is open for portions of June through September (Alternative I), May through September (Alternative II), and June through August (Alternative III).

In the San Francisco area, the fishery will open on May 1 and generally run through September in Alternatives I and II, and August in Alternative III, with closures in June and July that vary in timing and duration among the Alternatives. The October fall area target zone fishery from Point Reyes to Point San Pedro is included in Alternatives I and II.

The Monterey area features the same fishing opportunity as the San Francisco area from May through September, with one exception. For Alternative II, the fishery is open for two more days in July than the San Francisco area.

7.2 Recreational

In the area between the U.S./Canada border and the Queets River, Alternatives I and II include Chinook directed mark-selective recreational fisheries in May and June; Alternative III limits the mark-selective Chinook fishery to June. Alternative I includes a Chinook directed mark-selective recreational fishery beginning May 30 in the area between the Queets River and Cape Falcon, while the fishery in that area is limited to June in Alternatives II and III. All Alternatives have an area-wide mark-selective Chinook quota of 10,000.

In all Alternatives, all subareas between the U.S./Canada border and Cape Falcon are open seven days per week. For the Westport subarea, the Grays Harbor Control Zone is closed beginning August 11 in all Alternatives.

For the North and Central Oregon coast south of Cape Falcon, Chinook fisheries open March 15 and run through October. All Alternatives feature a mark-selective coho quota fishery in the summer, including the Oregon KMZ, with quota sizes and opening/closing dates that vary among the Alternatives. A non-mark-selective coho fishery also exists for the Cape Falcon to Humbug Mountain area beginning on September 4 under Alternatives I and II, and September 3 under Alternative III. Non-mark-selective coho quotas are being considered because of the relatively high Oregon Coast natural (OCN) coho and moderate Oregon Production Index (OPI) hatchery coho forecasts, which tend to reduce expected mark rates and increase the number of release mortalities on natural stocks. A modeling run was performed for Alternative I to assess fishery impacts from a potential rollover of coho from the Cape Falcon to Oregon/California border hatchery mark-selective recreational fishery to the Cape Falcon to Humbug Mountain non-mark-selective recreational fishery. Alternative I was modeled as if 11,000 marked coho quota were rolled into the 10,000 non-mark-selective coho quota. The resulting 21,000 non-mark-selective coho quota in this simulation did not result in an increase to the projected impacts for LCN coho, but impacts for OCN coho increased by 2.2 percent for a total marine exploitation rate of 13.4 percent. The primary purpose of this preseason

modeling exercise was to quantify the impact of a potential future inseason rollover action to ensure that Alternative I would remain impact neutral on the most limiting stock (LCN coho). The resulting preseason expected marine exploitation rate for OCN coho of 13.4 percent meets the OCN coho ESA consultation standard should any or all of the 11,000 be rolled into the non-mark-selective fishery.

Chinook fishing in both the Oregon and California KMZ starts prior to the Memorial Day weekend and runs through Labor Day. Alternatives I and II allow for longer seasons, beginning earlier in May than Alternative III. Minimum size limits are 24 inches for all Alternatives in the Oregon KMZ and Alternative III in the California KMZ. Alternatives I and II in the California KMZ feature a 20 inch minimum size limit.

South of the KMZ, the season will begin on April 4. In the Fort Bragg area, the closing date is November 8 for Alternatives I and II and September 7 for Alternative III. Alternative III also specifies a 24 inch minimum size limit beginning on May 1 and lasting for the duration of the season. For the San Francisco area, the season closing dates are the same as Fort Bragg, but with a minimum size limit of 24 inches early in the season that transitions to a 20 inch minimum at different points in the season for Alternatives I and II. Alternative III specifies a 24 inch minimum size limit for the entire season. For the Monterey area, Alternatives I and II specify a closing date of October 4 while Alternative III closes on September 7. Similar to the San Francisco area, the seasons all begin with a 24 inch minimum size limit in April but transition to a 20 inch minimum size limit at different points in the seasons for Alternatives I and II. The minimum size limit in Alternative III is 24 inches for the entire season.

7.3 Treaty Indian

Alternatives are generally similar in structure to 2015, with quotas that are similar or modestly decreased. All Alternatives have the provision that if the Chinook quota for the May-June fishery is exceeded, the excess will be deducted from the later all-salmon season.

8.0 AFFECTED ENVIRONMENT AND ANALYSIS OF IMPACTS

Based on National Oceanic and Atmospheric Administration (NOAA) Administrative Order (NAO) 216-6 Section 6.02, the affected environment may consist of the following components:

- Target (FMP) species
- Social or economic environments
- Non-target species
- Essential Fish Habitat
- Public health or safety
- ESA listed (non-salmon) species or critical habitat
- Marine mammals
- Biodiversity or ecosystem function

8.1 Salmon Stocks in the Fishery

Target stocks include Chinook, coho, and pink salmon stocks identified in Appendix A, Table A-1 of Preseason Report I (Part 1 of this EA; PFMC 2015b), which includes several ESA listed Chinook and coho stocks. These ESA listed stocks are not targeted in Council area salmon fisheries, but will be included in the analysis of effects on target species because they are impacted coincidentally with targeted salmon stocks and frequently constrain access to targeted stocks. Environmental impacts to other ESA listed species (e.g., marine mammals) from the Alternatives will be analyzed in a later section of this EA.

A description of the historical baseline for this component of the affected environment is presented in the Review of 2014 Ocean Salmon Fisheries (PFMC 2015a). A more general description of salmon life history

and population characteristics is presented in PFMC 2006. The current status (2015 ocean abundance forecasts) of the environmental components expected to be affected by the 2015 ocean salmon fisheries regulation Alternatives (FMP salmon stocks) are described in PFMC 2015b. The criteria used to evaluate whether there are significant effects from the Alternatives on target stocks are achievement of conservation objectives, ACLs, and rebuilding criteria. For ESA listed stocks impacted by the fishery, ESA consultation standards are applied to determine whether there are significant effects. The Salmon FMP conservation objectives are based on the best available science and are intended to prevent overfishing while achieving optimum yield from West Coast salmon fisheries as required by the MSA. The ESA consultation standards are likewise based on the best available science and are intended to ensure that fishery impacts do not appreciably reduce the likelihood of survival and recovery of listed species in the wild. FMP conservation objectives also include criteria for rebuilding overfished stocks. Therefore conservation objectives and consultation standards are appropriate indicators for determining the significance of fishery management actions referred to in NAO 216-6, Section 6.02.

8.1.1 Chinook Salmon

8.1.1.1 North of Cape Falcon

Abundance projections important to Chinook harvest management north of Cape Falcon in 2015 are:

- *Columbia River hatchery tules*. Combined production of Lower River Hatchery (LRH) and Spring Creek Hatchery (SCH) stocks returning to the Columbia River is predicted to be 255,400, higher than the 2014 preseason expectation of 225,000. The 2015 LRH forecast abundance is 94,900, slightly below the forecast of 110,000 in 2014. The 2015 SCH forecast abundance is 160,500, which is considerably higher than last year's forecast of 115,000.

The primary Chinook salmon management objective shaping the Alternatives north of Cape Falcon is:

- NMFS consultation standards and annual guidance for ESA listed stocks as provided in Section 5.0 above. Relevant stocks for the area north of Cape Falcon include LCR natural tule Chinook and Columbia Lower River Wild (LRW) fall Chinook.

Fishery quotas under the Alternatives are presented in Table 4. Stock-specific management criteria and their forecast values under the Alternatives are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality under the Alternatives are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCR natural tule Chinook. Descriptions pertaining to the achievement of key objectives for Chinook salmon management north of Cape Falcon are found below.

- *LCR natural tule fall Chinook*. The Alternative 1 exploitation rate of 41.5 percent exceeds the 41.0 percent NMFS consultation standard maximum for all fisheries. The exploitation rates in Alternatives II and III are less than the maximum, assuming river fisheries are structured similarly to last year. Additional shaping of PSC fisheries prior to the April Council meeting may result in Alternative I reaching compliance with the ESA consultation standard. LCR tules are the constraining Chinook stock for fisheries north of Cape Falcon in 2015.

- *SRW fall Chinook*. Alternatives have ocean exploitation rates of 50.6 percent or less of the base period exploitation rates, which is less than the ESA consultation standard of no more than 70 percent of the 1988-1993 base period exploitation rate for all ocean fisheries. SRW Chinook will not constrain ocean fisheries north of Cape Falcon in 2015.

All of the Alternatives for Chinook fisheries north of Cape Falcon satisfy NMFS ESA consultation standards and guidance, FMP conservation objectives, and all other objectives for relevant Chinook stocks except those listed above for LCR natural tule fall Chinook (Table 5).

8.1.1.2 South of Cape Falcon

Status of Chinook stocks important to 2015 Chinook harvest management south of Cape Falcon are:

- *SRFC*. The SI forecast is 652,000, which is slightly larger than the 2014 preseason forecast of 634,700.

- *KRFC*. The age-3 forecast is 342,200 KRFC. The age-4 forecast is 71,100 fish, and the age-5 forecast is 10,400. Last year's preseason forecast was 219,800 age-3, 67,400 age-4, and 12,100 age-5 fish.

- *SRWC*. No abundance forecast is made for this stock. The geometric mean of the most recent three years of escapement is 3,659 fish which represents an increase in this quantity relative to last year.

Key Chinook salmon management objectives shaping the Alternatives south of Cape Falcon are:

- NMFS consultation standards and annual guidance for ESA listed stocks as provided in Section 5.0 above. Relevant stocks for the area south of Cape Falcon include SRWC, California coastal Chinook, SRW fall Chinook, and LCR natural tule Chinook.

Fishery quotas under the Alternatives are presented in Table 4. Stock-specific management criteria and their forecast values under the Alternatives are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality under the Alternatives are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCR tule Chinook. Appendix A presents tables of the SRWC age-3 impact rate and age-4 KRFC harvest, by fishery/month/management area, under the three Alternatives. Descriptions pertaining to the achievement of key objectives for Chinook salmon management south of Cape Falcon are found below.

- *California coastal Chinook*. The ESA consultation standard that limits the forecast KRFC age-4 ocean harvest rate to a maximum of 16.0 percent is met by each of the Alternatives.

- *SRWC*. The ESA consultation standard that (1) limits the forecast age-3 impact rate in 2015 fisheries south of Point Arena to a maximum of 19.0 percent and (2) specifies time/area closures and minimum size limit constraints south of Point Arena, is met by each of the Alternatives.

- *KRFC*. The control rule-defined minimum of 40,700 natural area adult spawners is met by each of the Alternatives.

- *SRFC*. The control rule-defined minimum of 195,596 hatchery and natural area adult spawners is met by each of the Alternatives.

- *SRW fall Chinook*. SRW Chinook will not constrain ocean fisheries south of Cape Falcon in 2015.

All of the Alternatives for Chinook fisheries south of Cape Falcon satisfy NMFS ESA consultation standards and guidance, FMP conservation objectives, and all other objectives for relevant Chinook stocks (Table 5).

8.1.2 Coho Salmon

Abundance projections important to coho harvest management in Council area fisheries are:

- *OPI Hatchery coho.* The 2015 forecast for hatchery coho from the Columbia River and the coast south of Cape Falcon of 808,400 is lower than the 2014 forecast of 983,100. The Columbia River early coho forecast is 515,200 compared to the 2014 forecast of 526,600 and the Columbia River late coho forecast is 261,900, compared to the 2014 forecast of 437,500.

- *OCN coho.* The 2015 OCN forecast is 206,600 compared to the 2014 forecast of 230,600.

- *LCN coho.* The 2015 LCN forecast is 35,100 compared to the 2014 forecast of 33,100.

- *Puget Sound coho.* Among Puget Sound natural stocks, Skagit, Snohomish, Stillaguamish, and Hood Canal are in the normal category in 2015, and Strait of Juan de Fuca is in the critical category.

- *Interior Fraser (Thompson River) coho.* This Canadian stock continues to be depressed, and will continue to constrain ocean coho fisheries north of Cape Falcon in 2015.

- *Queets coho.* This Washington coastal stock is forecast to be low in 2015 and will constrain ocean fisheries.

Key coho salmon management objectives shaping the Alternatives are:

- NMFS consultation standards and annual guidance for ESA listed stocks as provided in Section 5.0 above. Relevant stocks include Central California Coast coho (south of the Oregon/California border), Southern Oregon/Northern California Coastal (SONCC) coho, OCN coho, and LCN coho. Based on this guidance, the maximum allowable exploitation rates for 2015 are: a combined marine/freshwater exploitation rate not to exceed 15.0 percent for OCN coho, a combined exploitation rate in marine-area and mainstem Columbia River fisheries not to exceed 23.0 percent for LCN coho, and a marine exploitation rate not to exceed 13.0 percent for Rogue/Klamath hatchery coho, used as a surrogate for the SONCC coho ESU. Furthermore, coho retention is prohibited in all California ocean fisheries.

- Salmon FMP conservation objectives and obligations under the PST Southern Coho Management Plan for stocks originating along the Washington coast, Puget Sound, and British Columbia as provided in Section 6.2 above. Because of the generally favorable forecasts for coho stocks in 2015, Interior Fraser is the key management stock for ocean fisheries north of Cape Falcon. The majority of the exploitation on this stock occur in Puget Sound and will be addressed in development of fishing seasons for inside waters during the North of Falcon co-management process by the State and Tribes prior to the April Council meeting. Because of their abundance status, Interior Fraser coho are subject to an exploitation rate ceiling of 10.0 percent in southern U.S. fisheries under the PST Southern Coho Management Plan. Queets coho will likely constrain ocean fisheries.

Fishery quotas under the Alternatives are presented in Table 4. Stock-specific management criteria and their forecast values under the Alternatives are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality under the Alternatives are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCN, OCN, and RK coho. Table 8 provides expected coho mark rates for west coast fisheries by month.

- *LCN coho.* All three Alternatives satisfy the maximum 23.0 percent exploitation rate when 2015 projected marine impacts are combined with the 2014 preseason modeled impacts for mainstem Columbia River fisheries. Marine exploitation rates projected for 2015 Alternatives range from 14.4 percent in Alternative I to 10.6 percent in Alternative III.

- *Queets wild coho.* The FMP MSY adult spawner objective for Queets wild coho is 5,800; projected ocean escapement values for the 2015 Alternatives range from 6,100 in Alternative I to 6,300 in Alternative III.

- *Interior Fraser coho*. Southern U.S. exploitation rates in all Alternatives satisfy the 10.0 percent maximum required by the PST Southern Coho Management Plan when 2015 projected marine impacts are combined with the 2014 preseason modeled impacts for Puget Sound fisheries. Shaping of the State and Tribal inside fisheries will occur during the North of Falcon process, and ocean fisheries may require further shaping before final management measures are adopted in order to comply with the PST limit.

All of the Alternatives for coho fisheries satisfy NMFS ESA consultation standards and guidance, FMP conservation objectives, and all other objectives for relevant coho stocks other than those listed above (Table 5).

8.1.3 Pink Salmon

Pink salmon are sufficiently abundant to merit management consideration in 2015. Impacts on Chinook and coho in pink-directed fisheries may be part of negotiations to reach a final agreement in North of Cape Falcon ocean and Puget Sound fisheries.

8.1.4 Summary of Environmental Impacts on Target Stocks

Stock forecasts for some Canadian stocks and the actual PST limits on AABM fisheries are not known at this time, and preliminary values have been used in the analyses presented in this report. These forecasts and limits will be available prior to the April Council meeting. Negotiations in the North of Falcon process will not be completed until the April Council meeting. These negotiations affect allocation of stock impacts primarily among inside fisheries (State, Tribal, recreational, various commercial sectors, etc.) but also between inside and ocean fisheries.

Environmental impacts on salmon stocks are assessed based on compliance with conservation objectives, ACLs, rebuilding plans, and ESA consultation standards. As noted in the description of the Alternatives (Tables 1, 2, and 3), if analyses using the updated values and the results of these negotiations do not result in compliance with FMP conservation objectives or ESA consultation standards, some Alternatives will not be viable and impacts in Council-area fisheries will need to be reduced to comply with all applicable objectives and standards. If updated values and negotiations result in compliance with applicable objectives and standards, Council area fishery impacts would not increase; therefore, the analysis of effects would include the upper bound of a reasonable range of effects under the Alternatives considered for 2015 Council area salmon fisheries.

8.1.4.1 Targeted Salmon Stocks

Based on current assumptions regarding Canadian, Alaskan, and inside fishery impacts, all target salmon stocks (non-ESA listed) meet their FMP conservation objectives under Alternatives I, II, and III.

8.1.4.2 ESA Listed Salmon Stocks

Based on current assumptions regarding Canadian, Alaskan, and inside fishery impacts, all ESA listed salmon stocks meet their ESA consultation standards under all Alternatives except LCR natural tule Chinook in Alternative I (Table 5). Further shaping of Canadian, Alaskan, and inside fisheries may result in compliance with the ESA consultation standard; however, additional restrictions to Council area fisheries may be necessary to meet both consultation standards and inside fishery needs.

ESA consultation standards are met for all stocks under Alternatives II and III (Table 5).

Council-area fisheries have a minor impact on ESA-listed Puget Sound Chinook and on most Chinook stocks subject to the 2009 PST Agreement. At this point there appears to be sufficient flexibility within Council and inside area fisheries as a whole to achieve protection for the Puget Sound Chinook ESU.

8.2 Socioeconomics

In general the Council manages the salmon fishery to meet escapement objectives for stocks that are expected to achieve optimum yields while rebuilding depressed stocks. While analysis of biological impacts is organized around salmon stocks that spawn in particular rivers, socioeconomic impacts under the regulatory Alternatives are analyzed by ocean fishery management areas as described in the Salmon FMP. Although most stocks range across several areas, a different set of stocks is most abundant in each ocean area, thus the use of management areas facilitate more optimal management of each stock than would coastwide regulations,. From north to south, the fishery management areas are (1) from the U.S./Canada border to Cape Falcon (45°46' N. lat.), which is on the Oregon coast south of the Columbia River mouth; (2) between Cape Falcon and Humbug Mountain (42°40'30" N. lat.) 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. lat.) in northern California; (4) from Horse Mountain to Point Arena (38°57'30" N. lat.); and (5) from Point Arena to the U.S./Mexico border. There are also numerous subdivisions within these areas that are used to further balance stock conservation and harvest allocation needs. A map of the boundaries of these areas, also showing the main salmon ports, appears on the inside back cover of this report. The following analysis of impacts on fishermen and fishing communities is organized around these broad management areas.

The Review of 2014 Ocean Salmon Fisheries (PFMC 2015a) provides an historical description of the salmon fishery affected environment. In addition to stock status assessments, the document reports socioeconomic impacts of historical fisheries and analyzes the current socioeconomic status of West Coast salmon fisheries. For the purpose of characterizing the economic impact of Council-area ocean salmon fisheries, commercial exvessel value, recreational fishing trips, and community level personal income impacts resulting from both commercial and recreational fishing activities are used.

The short-term economic effects of the regulatory Alternatives for non-Indian fisheries are shown in Tables 9 and 10. Table 9 shows projected commercial troll impacts expressed in terms of estimated potential exvessel value. Table 10 shows projected recreational fisheries impacts in terms of the number of projected angler-trips and community personal income impacts associated with those activities. Note that exvessel values shown under the Alternatives for the commercial troll fishery in Table 9 and income impact values shown for the recreational fishery in Table 10 are not directly comparable. More directly comparable measures of short-term economic impacts from commercial and recreational salmon fisheries appear in Figures 1 and 2, which show estimated community income impacts under the commercial troll and recreational fishery Alternatives, respectively, compared to historical impacts in real (inflation-adjusted) dollars. In general, income impacts are estimates of the amount of income generated by the economic linkages associated with a particular activity (see Chapter IV of the Review of 2014 Ocean Salmon Fisheries for additional description of income impact estimates). Income impacts are a measure of relative economic

activity. Differences in income impacts between an Alternative and the 2014 fishery indicate the expected impact of the Alternative compared with not taking action, i.e., if 2014 regulations were to remain in place. While reductions in income impacts may not necessarily reflect net losses, they are likely to indicate losses to businesses and individuals in a community that depends on that activity for livelihood.

Total economic effects under the Alternatives may vary more or less than is indicated by the short-term impacts on ocean fisheries reported below. Salmon that are not harvested in the ocean do not necessarily result in an economic loss, as they may become available for additional inside harvest or may provide additional spawning escapement. Alternatives that restrict ocean harvests may increase opportunities for inside harvesters (e.g., higher commercial revenue or more angler trips) or contribute to higher inside catch per unit effort (CPUE) (i.e., lower costs for commercial harvesters and/or higher success rates for recreational fishers). Harvest forgone by both ocean fisheries and inside fisheries may impact future production, although the magnitude of that effect is uncertain depending on the resulting escapement level compared to MSY escapement and the nature of the spawner-recruit relationship which are influenced by habitat conditions in the ocean and in the spawning grounds.

Fishing effort estimates for the recreational fishery south of Cape Falcon are based on measures developed by the STT for modeling biological impacts. STT estimates for south of Cape Falcon use multi-year averages to predict effort for the coming year. Consequently, if the multi-year average for a particular time period and area happens to be higher than last year's year effort level, then the model may forecast an increase in effort for the coming year even though management measures may actually be relatively more constraining or *vice-versa*. Recreational fishery effort north of Cape Falcon was estimated using historical CPUE estimates applied to salmon quotas under the Alternatives. For the summer mark-selective coho fishery, coho quotas North of Cape Falcon under the Alternatives, although somewhat lower than last year, are still relatively high compared with the recent past. For modeling projected economic impacts of the summer recreational coho fishery, the average 2014 Washington coho CPUE was applied to the coho quota under each Alternative. For the June Chinook fisheries Alternatives, average 2011-2013 Washington Chinook CPUE was applied.

Exvessel revenues in Table 9 are based on estimated harvest by catch area while commercial income impacts in Figure 1 are based on projected deliveries by landing area. Historically there has been a divergence between these two measures. The difference is due to deliveries of salmon caught in certain catch areas to ports in neighboring catch areas. This pattern is particularly true for areas between Humbug Mountain in Oregon and Point Arena in California. In an attempt to account for this effect and assign income impacts to the "correct" landing area, adjustments are made based on historical transfer patterns. The patterns are typically inferred from the most recent year's catch and landings data. For example in 2014 there were apparently deliveries of salmon caught between Cape Falcon and Humbug Mountain to landing ports in the Oregon KMZ region, and deliveries of salmon caught between Horse Mountain and Point Arena to landings ports in the California KMZ region. There were also transfers of harvest between other catch areas and adjacent landings ports but these were much less by comparison.

The expected harvests used to model commercial fishery impacts are taken from Table 6. The prior year's exvessel prices were assumed to be the best indicator of prices expected in the coming season. Coastwide average exvessel Chinook prices in 2014 were lower in inflation-adjusted terms than in 2013, but still relatively high compared with recent history. However if actual average exvessel prices this year prove to be much higher or lower than what was observed in 2014, then salmon exvessel revenues and resulting commercial fisheries income impacts projected in this document may prove to be correspondingly biased. Unless otherwise noted, economic effects of the commercial and recreational fisheries Alternatives summarized below are compared in terms of estimated community income impacts.

8.2.1 Alternative I

Under Alternative I, coastwide community personal income impacts from commercial salmon fisheries are projected to be below last year's (2014) level by 17 percent but to exceed the recent (2010-2014) inflation-adjusted average by 19 percent. Coastwide income impacts from recreational fishing are projected to exceed last year's level by 21 percent and the recent inflation-adjusted average by 54 percent.

Commercial fisheries income impacts are projected to exceed last year's level in management areas North of Cape Falcon and South of Point Arena, but to fall below last year's performance in all other areas. Commercial fisheries income impacts under this Alternative are projected to exceed the inflation-adjusted 2010-2014 average in all management areas except Horse Mountain to Point Arena.

Commercial fisheries income impacts North of Cape Falcon are projected to be 33 percent higher than last year and 61 percent higher than the 2010-2014 inflation-adjusted average.

Areas between Cape Falcon and Point Arena would see commercial fisheries income impacts that are below last year's levels. Areas between Cape Falcon and Humbug Mountain, between Humbug Mountain and Horse Mountain, and between Horse Mountain and Point Arena would see projected declines of 55, 0.3 and 29 percent, respectively, below last year's levels. However only the area between Horse Mountain and Point Arena is projected to have commercial fisheries income impacts that are below (-10 percent) their 2010-2014 inflation-adjusted average.

Projected income impacts from recreational fisheries North of Cape Falcon are 35 percent higher than last year and 81 percent higher than the 2010-2014 inflation-adjusted average.

Recreational fisheries income impacts South of Cape Falcon are projected to be 11 percent higher than last year overall and 38 percent above the 2010-2014 inflation-adjusted average. Impacts are projected to be positive compared with last year in all management areas except Cape Falcon to Humbug Mountain, where a decline of 32 percent is projected, but still 21 percent above the 2010-2014 inflation-adjusted average. The greatest percentage increase for management areas South of Cape Falcon is for the area South of Point Arena, where an increase of 30 percent is projected, which is also 45 percent above the 2010-2014 inflation-adjusted average.

Income impacts under Alternative I are not projected to be significant. Combined commercial and recreational community income impacts in affected management areas are either positive compared with last year or substantially above recent year averages and within the observed historical range of impact levels.

8.2.2 Alternative II

Under Alternative II, coastwide community personal income impacts from commercial salmon fisheries are projected to fall below last year's (2014) level by 18 percent, but to exceed the recent (2010-2014) inflation-adjusted average by 19 percent. Coastwide income impacts from recreational fishing are projected to exceed last year's level by 12 percent and the inflation-adjusted 2010-2014 average by 43 percent.

Commercial fisheries income impacts are projected to fall below last year's level in all management areas except North of Cape Falcon and South of Point Arena, but to exceed the inflation-adjusted 2010-2014 average in all management areas except Cape Falcon to Humbug Mountain and Horse Mountain to Point Arena.

Commercial fisheries income impacts in the area North of Cape Falcon are projected to be 19 percent higher than last year and 44 percent higher than the 2010-2014 inflation-adjusted average. The area between Cape

Falcon and Humbug Mountain is projected to see commercial fisheries income impacts 57 percent below last year's level and two percent below the 2010-2014 inflation-adjusted average.

The area between Humbug Mountain and Horse Mountain is projected to see commercial fisheries income impacts 23 percent below last year but 39 percent above the 2010-2014 inflation-adjusted average. Areas between Horse Mountain and Point Arena would see projected commercial fisheries income impacts 24 percent below last year's level and four percent below the 2010-2014 inflation-adjusted average. Areas South of Point Arena would see projected commercial fisheries income impacts 37 percent above last year's level and 30 percent above the 2010-2014 inflation-adjusted average.

Projected income impacts from recreational fisheries North of Cape Falcon are 16 percent higher than last year and 56 percent above the 2010-2014 inflation-adjusted average.

Recreational fisheries income impacts South of Cape Falcon are projected to be nine percent higher overall than last year and 36 percent higher than the 2010-2014 inflation-adjusted average. Impacts are projected to be positive in all management areas except Cape Falcon to Humbug Mountain where a decline of 37 percent from last year's level is projected, but still 12 percent above the 2010-2014 inflation-adjusted average. The greatest percentage increase for management areas South of Cape Falcon is for the South of Point Arena region where an increase of 30 percent is projected, 45 percent above the 2010-2014 inflation-adjusted average.

Income impacts under Alternative II are not projected to be significant. Combined commercial and recreational community income impacts in affected management areas are either positive compared with last year or substantially above recent year averages and within the observed historical range of impact levels.

8.2.3 Alternative III

Under Alternative III, coastwide community personal income impacts from commercial salmon fisheries are projected to fall below last year's (2014) level by 20 percent but to exceed the recent (2010-2014) inflation-adjusted average by 15 percent. Coastwide income impacts from recreational fishing are projected to exceed last year's level by two percent and the inflation-adjusted 2010-2014 average by 31 percent.

Commercial fisheries income impacts are projected to fall below last year's level in all management areas except North of Cape Falcon and South of Point Arena, but to exceed the inflation-adjusted 2010-2014 average in all management areas except Cape Falcon to Humbug Mountain and Horse Mountain to Point Arena.

Commercial fisheries income impacts in the area North of Cape Falcon are projected to be seven percent higher than last year and 29 percent above the 2010-2014 inflation-adjusted average. The area between Cape Falcon and Humbug Mountain is projected to see commercial fisheries income impacts 58 percent below last year's level and four percent below the 2010-2014 inflation-adjusted average.

The area between Humbug Mountain and Horse Mountain is projected to see commercial fisheries income impacts 35 percent below last year, but 18 percent above the 2010-2014 inflation-adjusted average. Areas between Horse Mountain and Point Arena would see projected commercial fisheries income impacts 23 percent below last year's level and four percent below the 2010-2014 inflation-adjusted average. Areas South of Point Arena would see projected commercial fisheries income impacts 40 percent above last year's level and 34 percent above the 2010-2014 inflation-adjusted average.

Projected income impacts from recreational fisheries North of Cape Falcon are four percent higher than last year and 39 percent above the 2010-2014 inflation-adjusted average.

Recreational fisheries income impacts South of Cape Falcon are projected to be slightly higher overall than last year and 26 percent higher than the 2010-2014 inflation-adjusted average. Impacts are projected to be positive in all management areas except Cape Falcon to Humbug Mountain where a decline of 40 percent from last year's level is projected, but still seven percent above the 2010-2014 inflation-adjusted average. The greatest percentage increase for management areas South of Cape Falcon is for the area South of Point Arena where an increase of 19 percent is projected, 33 percent above the 2010-2014 inflation-adjusted average.

Income impacts under Alternative III are not projected to be significant. Combined commercial and recreational community income impacts in affected management areas are either positive compared with last year or substantially above recent year averages and within the observed historical range of impact levels.

8.2.4 Summary of Impacts on the Socioeconomic Environment

The commercial fishery Alternatives are expected to generate coastwide income impact impacts that are 17 percent to 20 percent below last year's levels, although these levels are still 15 percent to 19 percent above the 2010-2014 inflation-adjusted average. However these coastwide declines mask regional differences along the coast. Income impacts from commercial fisheries in catch areas and ports north of Cape Falcon and south of Point Arena are projected to be higher under the Alternatives than last year and also higher than the average of the recent past. The assumed shifting of a portion of landings (based on 2014 patterns) from areas immediately north and south of the KMZ to ports in the KMZ area may offset some of the effect of reduced KMZ harvest on regional ports. While areas immediately south of the KMZ are projected to see reductions in commercial harvest and income impacts compared with last year, areas South of Point Arena are projected to see increased commercial fisheries income impacts over last year and compared with the 2010-2014 inflation-adjusted average.

Total coastwide income impacts from recreational fisheries are projected to be higher than last year and the 2010-2014 inflation-adjusted average, although areas between Cape Falcon and Humbug Mountain are projected to see reductions under all the Alternatives relative to last year but still above their 2010-2014 averages. Overall the region South of Cape Falcon is projected to see relatively small increases compared with last year under all three Alternatives, and still well above the 2010-2014 inflation-adjusted average. The area North of Cape Falcon is also projected to see increased income impacts compared with last year and the 2010-2014 inflation-adjusted average under all three Alternatives.

8.3 Non-target Fish Species

Prior NEPA analyses have considered the effects of the ocean salmon fisheries on non-target fish species. Since then, ocean salmon fisheries have not changed substantially in terms of season length, areas, depth, bag limits, etc. Nor is there any new information to suggest that the incidental nature of encounters of non-target species in ocean salmon fisheries has changed. Therefore, conclusions from previous environmental analyses indicating that effects on non-target fish species are low and not significant are still applicable, as discussed below. The differences between the Alternatives for the 2015 salmon fishery are not discernible with respect to their effect on non-target fish species.

Impacts to groundfish stocks from salmon troll fisheries continue to be managed as part of the open access groundfish fishery sector, and are at similar levels compared to recent years. Previous environmental analysis concluded that the amount of groundfish taken incidentally in the salmon fishery is very low and is not substantially altered by changes in the salmon fishery. (NMFS 2003; Appendix B). The 2015 ocean

salmon regulation Alternatives are not expected to differ substantially from fisheries analyzed previously with respect to groundfish impacts; therefore, effects from the Alternatives to groundfish stocks are not significant.

Impacts to Pacific halibut from salmon troll fisheries continue to be managed under limits established through the International Pacific Halibut Commission (IPHC) process and under the Area 2A (Council area) catch sharing plan. Previous environmental analysis stated that data on the commercial segment of salmon fisheries show the co-occurrence rates for salmon and halibut, coastal pelagic species, highly migratory species, and non-Council managed fish species are low (NMFS 2003; Appendix B). The 2015 ocean salmon regulation Alternatives include Pacific halibut landing restrictions within the range enacted in the past, and are not expected to differ substantially from earlier analyses with respect to Pacific halibut impacts; therefore, effects from the Alternatives to Pacific halibut are not significant. Likewise, there are no changes to the salmon fishery for 2015 that would change impacts to other non-salmon fish species compared to previous analyses, therefore, effects from the Alternatives to these species are not expected to be significant.

8.4 Marine Mammals

The commercial salmon troll fisheries off the coasts of Washington, Oregon, and California are classified as Category III fisheries, indicating a remote or no likelihood of causing incidental mortality or serious injury to marine mammals (79 FR 14418). Recreational salmon fisheries use similar gear and techniques as the commercial fisheries and are assumed to have similar encounter rates and impacts. The non-ESA listed marine mammal species that are known to interact with ocean salmon fisheries are California sea lion and harbor seals. Populations of both these species are at stable and historically high levels. There is no new information to suggest that the nature of interactions between California sea lions or harbor seals in ocean salmon fisheries has changed since the Category III determination. Therefore, the impacts from the 2015 salmon regulation Alternatives to non-ESA listed marine mammals are not expected to be significant, and there is no discernible difference between the effects of the Alternatives on these resources.

8.5 ESA Listed Species

Available information indicates that Pacific Coast salmon fisheries are not likely to jeopardize the existence of the Guadalupe fur seal (NMFS 2003; Appendix B). No sea turtles have been reported taken by the ocean salmon fisheries off Washington, Oregon, or California, and NMFS has determined that commercial fishing by Pacific Coast salmon fisheries would pose a negligible threat to Pacific turtle species (NMFS 2003; Appendix B). There is no discernible difference between the effects of the Alternatives on these resources.

The NMFS BO on Southern Resident killer whale distinct population segment (NMFS 2008; Appendix B) concluded that ocean salmon fisheries were not likely to jeopardize the continued existence of the Southern Resident killer whales or adversely modify their critical habitat. NMFS has initiated a five year review of the Southern Resident killer whale ESA listing. There is new information that indicates Chinook salmon abundance may correlate with killer whale population growth rate, and while this information is under review, it is possible that future consultation standards for Puget Sound and possibly Council area fisheries will change as a result of this new information. However, the 2015 ocean salmon regulations are covered by the NMFS 2008 BO, and on that basis it is expected that the 2015 regulations would not have significant impacts to Southern Resident killer whales. There is no discernible difference between the effects of the Alternatives on killer whales.

Other ESA listed salmonid species present in Council area waters include sockeye and chum salmon, and steelhead trout. These species are rarely encountered in ocean salmon fisheries, and Alternatives for 2015 Council area ocean salmon fisheries are in compliance with applicable BOs for listed ESUs of these species as listed in Chapter 5 of this document. Because anticipated impacts are negligible, there are no significant

impacts expected on listed sockeye or chum salmon or steelhead trout from the Alternatives analyzed in this EA, and there is no discernible difference between the effects of the Alternatives on these resources.

8.6 Seabirds

The types of vessels used in ocean salmon fisheries and the conduct of the vessels are not conducive to collisions or the introduction of rats other non-indigenous species to seabird breeding colonies. Other types of accidental bird encounters are a rare event for commercial and recreational ocean salmon fisheries (NMFS 2003; Appendix B). Therefore, there are no significant impacts expected on seabirds from the Alternatives analyzed in this EA, and there is no discernible difference between the effects of the Alternatives on seabirds.

8.7 Biodiversity and Ecosystem Function

The removal of adult salmon by the ocean fisheries is not considered to significantly affect the lower trophic levels or the overall marine ecosystem because salmon are not the only or primary predator in the marine environment (NMFS 2003; Appendix B). Therefore, no significant impacts are expected on biodiversity or ecosystem function from the Alternatives analyzed in this EA, and there is no discernible difference between the effects of the Alternatives on these resources.

8.8 Ocean and Coastal Habitats

Council Area salmon fisheries do not employ bottom contact gear, and there is no evidence of direct gear effects on fish habitat from Council-managed salmon fisheries on EFH for salmon or other managed species (PFMC 2006; Appendix B). Critical habitat for ESA listed salmon does not include Council area ocean water. Because Council area salmon fisheries are conducted at sea and without bottom contact gear, there is no interaction with unique geographic characteristics or other cultural, scientific, or historical resources such as those that might be listed on the National Register of Historical Places.

8.9 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 Salmon FMP, however, has provisions to adjust management measures if unsafe weather affected fishery access. The Alternatives for 2015 ocean salmon regulations have season structures similar to those employed in previous salmon seasons and are not expected to result in any significant increase in the risk to human health or safety at sea (PFMC 2006; Appendix B). There are also no discernible differences between the effects of the Alternatives on the risk to human health or safety at sea.

8.10 Cumulative Impacts

A cumulative effects analysis is required by the Council on Environmental Quality (CEQ) (40 CFR part 1508.7). The purpose of a cumulative effects analysis is to consider the combined effects of many actions on the human environment over time that would be missed if each action were evaluated separately. CEQ guidelines recognize that it is not practical to analyze the cumulative effects of an action from every conceivable perspective, but rather, the intent is to focus on those effects that are truly meaningful. A formal cumulative impact assessment is not necessarily required as part of an EA under NEPA as long as the significance of cumulative impacts has been considered (U.S. EPA 1999). The following addresses the significance of the expected cumulative impacts as they relate to the Pacific Coast salmon fishery.

8.10.1 Consideration of the Effected Resource

The affected resources that relate to the Pacific Coast salmon fishery are described in the Affected Environment sections of Preseason I and in Section 8.0 of this report. The significance of the cumulative effects will be discussed in relation to these affected resources listed below.

- Fishery and Fish Resources,
- Protected Resources,
- Biodiversity/Ecosystem Function and Habitats,
- Socioeconomics.

8.10.2 Geographic Boundaries

The analysis focuses on actions related to Council-managed ocean salmon commercial and recreational fisheries. Council-managed ocean fisheries occur in the exclusive economic zone (EEZ), from three to 200 miles offshore, off the coasts of the states of Washington, Oregon, and California as well as the ports in these states that receive landings from the ocean salmon fisheries. Since salmon are anadromous and spend part of their lifecycle in fresh water, the geographic scope also includes internal waters (e.g., Puget Sound) and rivers that salmon use to migrate towards their spawning grounds.

8.10.3 Temporal Boundaries

The temporal scope of past and present actions for the affected resources is primarily focused on actions that have occurred after framework FMP implementation (1984). The temporal scope of future actions for all affected resources extends about five years into the future. This period was chosen because the dynamic nature of resource management and lack of information on future projects make it very difficult to predict impacts beyond this timeframe with any certainty.

8.10.4 Past, Present, and Reasonably Foreseeable Future Actions

Fishery Actions

The Council sets management measures for ocean salmon fisheries annually based on stock forecasts and in accordance with conservation objectives set in the FMP and guidance provided by NMFS for managing impacts to ESA-listed stocks. The Council manages ocean salmon fisheries through an intensive preseason analysis process to shape salmon fisheries impacts on salmon stocks within the parameters of the FMP conservation measures and ESA requirements.

Fisheries outside of the Council's jurisdiction also impact the Council-area salmon fishery. The Council considers fisheries managed by the states and treaty Indian tribes in the North of Falcon management process and Columbia River fisheries managed under U.S. v. Oregon Management Plan, as well as obligations for fisheries off Alaska and Canada under the Pacific Salmon Treaty (PFMC and NMFS 2014). Additionally, the Council and NMFS manage ocean salmon fisheries inseason to keep fisheries impacts within the constraints set preseason. The Council also conducts annual methodology reviews to improve models and other tools for assessing salmon stocks.

Non-Fishing Related Actions

Because salmon spend part of their lifecycle in fresh water, they are more vulnerable to a broad range of human activities (since humans spend most of their time on land) that affect the quantity and 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 (such as increased silt in the water from adjacent land use). Non-fishing activities in the marine environment can introduce chemical pollutants and sewage; and result in changes in water temperature, salinity, dissolved oxygen, and suspended sediment which poses a risk to the affected resources. Human-induced non-fishing activities tend to be localized in

nearshore areas and marine project areas. When these activities co-occur, they are likely to work additively or synergistically to decrease habitat quality and may indirectly constrain the sustainability of the managed resources, non-target species, and protected resources. Decreased habitat suitability tends to reduce the tolerance of affected species to the impacts of fishing effort. Mitigation through regulations that would reduce fishing effort could negatively impact human communities. The overall impact to the affected species and their habitats on a population level is unknown, but likely neutral to low negative, since a large portion of these species have a limited or minor exposure to the localized non-fishing perturbations.

For many of the proposed non-fishing activities to be permitted by other Federal agencies, those agencies would examine the potential impacts on the affected resources. The Magnuson-Stevens Act (50 CFR 600.930) imposes an obligation on other Federal agencies to consult with the Secretary of Commerce on actions that may adversely affect EFH. The eight fishery management councils engage in the review process by making comments and recommendations on any Federal or state action that may affect habitat, including EFH, for their managed species and by commenting on actions likely to substantially affect habitat, including EFH. In addition, under the Fish and Wildlife Coordination Act (Section 662), "whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the U.S., or by any public or private agency under Federal permit or license, such department or agency first shall consult with the U.S. Fish and Wildlife Service (USFWS), Department of the Interior, and with the head of the agency exercising administration over the wildlife resources of the particular state wherein the" activity is taking place. This act provides another avenue for review of actions by other Federal and state agencies that may impact resources that NMFS manages in the reasonably foreseeable future. In addition, NMFS and the USFWS share responsibility for implementing the ESA. ESA requires NMFS to designate "critical habitat" for any species it lists under the ESA (i.e., areas that contain physical or biological features essential to conservation, which may require special management considerations or protection) and to develop and implement recovery plans for threatened and endangered species. The ESA provides another avenue for NMFS to review actions by other entities that may impact endangered and protected resources whose management units are under NMFS' jurisdiction.

The effects of climate on the biota of the California Current ecosystem have been recognized for some time. The El Niño/Southern Oscillation (ENSO) is widely recognized to be the dominant mode of inter-annual variability in the equatorial Pacific, with impacts throughout the rest of the Pacific basin and the globe. During the negative (El Niño) phase of the ENSO cycle, jet stream winds are typically diverted northward, often resulting in increased exposure of the Pacific Coast of the U.S. to subtropical weather systems. The impacts of these events to the coastal ocean generally include reduced upwelling winds, deepening of the thermocline, intrusion of offshore (subtropical) waters, dramatic declines in primary and secondary production, poor recruitment, reduced growth and survival of many resident species (such as salmon and groundfish), and northward extensions in the range of many tropical species. Concurrently, top predators such as seabirds and pinnipeds often exhibit reproductive failure. In addition to inter-annual variability in ocean conditions, the North Pacific seems to exhibit substantial inter-decadal variability, which is referred to as the Pacific (inter) Decadal Oscillation (PDO).

Within the California Current itself, Mendelssohn et al, (2003) described long-term warming trends in the upper 50 to 75 m of the water column. Recent paleoecological studies from marine sediments have indicated that 20th century warming trends in the California Current have exceeded natural variability in ocean temperatures over the last 1,400 years. Statistical analyses of past climate data have improved our understanding of how climate has affected North Pacific ecosystems and associated marine species productivities.

In addition, changes in river flows and flow variability may affect population growth of anadromous fishes. Ward et al., (2015) found that increases in variability in freshwater flows may have a more negative effect than any other climate signal included in their model. Some climate change models predict that in the Pacific Northwest, there will be warmer winters and more variable river flows, which may affect the ability of anadromous fishes to recover in the future (Ward et al., 2015). However, our ability to predict future impacts on a large scale ecosystem stemming from climate forcing events remains uncertain.

8.10.5 Magnitude and Significance of Proposed Action

In determining the magnitude and significance of the cumulative effects, the additive and synergistic effects of the proposed action, as well as past, present, and future actions, must be taken into account. The following section presents the effects of past, present, and reasonably foreseeable future actions on each of the managed resources. This is followed by a discussion on the synergistic effects of the proposed action, as well as past, present, and reasonably foreseeable future actions.

8.10.5.1 Fishery and Fish Resources

Past, present, and reasonably foreseeable future actions that affect the salmon fishery and fish resources are considered annually when the Council sets management measures for ocean salmon fisheries based on stock forecasts and in accordance with conservation objectives set in the FMP and guidance provided by NMFS for managing impacts to ESA-listed stocks. The Council also considers fisheries managed by the states and treaty Indian tribes in the North of Falcon management process and Columbia River fisheries managed under U.S. v. Oregon Management Plan, as well as obligations under the Pacific Salmon Treaty (PFMC and NMFS 2014). Additionally, the Council and NMFS manage ocean salmon fisheries inseason to keep fisheries impacts within the constraints set preseason. The Council also conducts annual methodology reviews to improve models and other tools for assessing salmon stocks. Therefore, the magnitude and significance of cumulative effects, including the proposed action, on the salmon fishery and fish resources are expected to be low positive and not significant.

8.10.5.2 Protected Resources

Past, present, and foreseeable future actions that affect ESA-listed salmon are considered annually when the Council sets management measures for ocean salmon fisheries; NMFS provides guidance for managing impacts to ESA-listed stocks based on biological opinions and stock productivity information provided by the states and analyzed by the STT. Fishery management actions have been taken to manage impacts on ESA-listed salmon, and the states have developed information to better inform fishery management decisions. Therefore, the magnitude and significance of cumulative effects, including the proposed action on ESA-listed salmon are expected to be low positive and not significant.

8.10.5.3 Biodiversity/Ecosystem Function and Habitats

Past, present, and foreseeable future actions that affect biodiversity/ecosystem function and habitats are considered to the extent practicable annually. When considering the proposed action's removal of adult salmon by the ocean fisheries in addition to past, present, and reasonably foreseeable future actions, such removal of these salmon is not considered to significantly affect the lower trophic levels or the overall marine ecosystem because salmon are not the only primary predator. In addition, Council-area salmon fisheries are conducted at sea with hook-and-line gear and thus, there is no to negligible interactions expected with EFH for salmon or other managed species.

8.10.5.4 Socioeconomic Environment

Each year the Council evaluates the socioeconomic impact of past salmon fisheries in the stock assessment and fishery evaluation document (e.g., PFMC 2015a) and also evaluates foreseeable future impacts in the

annual preseason reports; these documents are also used as the basis for the NEPA analysis for the annual management measures. The magnitude and significance of cumulative effects, including the proposed action, on the socioeconomic environment is expected to be low positive, and not significant.

9.0 CONCLUSION

This analysis has identified no significant environmental impacts that would result from the 2015 ocean salmon regulation Alternatives, from final regulations selected from within the range presented in these Alternatives.

10.0 LIST OF AGENCIES AND PERSONS CONSULTED

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

October 21-23, 2014:	**Salmon Technical Team/Scientific and Statistical Committee Salmon Subcommittee joint meeting**, Portland, Oregon.
November 14-19:	**Pacific Fishery Management Council meeting**, Costa Mesa, California.
January 20-23, 2015:	**Salmon Technical Team (Review preparation)**, Portland, Oregon.
February 11:	California Fish and Game Commission meeting, Sacramento, California.
February 17-20:	**Salmon Technical Team (Preseason Report I preparation)**, Portland, Oregon.
February 26:	California Department of Fish and Wildlife public meeting, Santa Rosa, California.
	Oregon Salmon Industry Group meeting, Newport, Oregon.
March 2:	Washington Department of Fish and Wildlife public meeting, Olympia, Washington.
March 6:	Oregon Fish and Wildlife Commission meeting, Salem, Oregon.
March 8-12:	**Pacific Fishery Management Council meeting**, Vancouver, Washington.
March 16:	North of Falcon and *U.S.* v. *Oregon Forums*, Vancouver, Washington.
	California Fish and Game Commission meeting, Teleconference.
March 18:	North of Falcon, Ocean fisheries, Puget Sound, and *U.S.* v. *Oregon Forums*, Olympia, Washington.
March 30-31:	**Public hearings on management options** in Westport, Washington; Coos Bay, Oregon; and Fort Bragg, California.
April 1:	North of Falcon, Ocean fisheries and Puget Sound Forums, Lynnwood, Washington.
April 11-16:	**Pacific Fishery Management Council meeting**, Rohnert Park, CA.
April 17:	Washington Fish and Wildlife Commission meeting, Teleconference.
	California Fish and Game Commission meeting, Teleconference.
April 24:	Oregon Fish and Wildlife Commission meeting, Bend, Oregon.

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

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

National Marine Fisheries Service, Sustainable Fisheries Division, West Coast 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
United States Coast Guard

Northwest Indian Fish Commission
Columbia River Intertribal Fish Commission
West Coast Indian Tribes

11.0 REFERENCES

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PFMC. 2015a. Review of 2014 ocean salmon fisheries. Pacific Fishery Management Council, Portland, Oregon.

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TABLE 1. Commercial troll management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015 (Page 1 of 9)

A. SEASON ALTERNATIVE DESCRIPTIONS

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
North of Cape Falcon	**North of Cape Falcon**	**North of Cape Falcon**
Supplemental Management Information	**Supplemental Management Information**	**Supplemental Management Information**
1. Overall non-Indian TAC: 131,000 (non-mark-selective equivalent of 125,000) Chinook and 180,000 coho marked with a healed adipose fin clip (marked). 2. Non-Indian commercial troll TAC: 67,000 Chinook and 20,800 marked coho. 3. Trade: Commercial troll traded 8,000 coho to the recreational fishery for 2,000 Chinook. Additional trades may be considered at the April Council meeting. 4. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.	1. Overall non-Indian TAC: 121,000 (non-mark-selective equivalent of 115,000) Chinook and 160,000 coho marked with a healed adipose fin clip (marked). 2. Non-Indian commercial troll TAC: 59,000 Chinook and 25,600 marked coho. 3. Trade: May be considered at the April Council meeting 4. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.	1. Overall non-Indian TAC: 111,000 (non-mark-selective equivalent of 105,000) Chinook and 140,000 coho marked with a healed adipose fin clip (marked). 2. Non-Indian commercial troll TAC: 53,000 Chinook and 22,400 marked coho. 3. Trade: May be considered at the April Council meeting 4. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.
U.S./Canada Border to Cape Falcon • May 1 through earlier of June 30 or 40,200 Chinook, no more than 12,300 of which may be caught in the area between the U.S./Canada border and the Queets River and no more than 14,000 are caught in the area between, Leadbetter Pt. and Cape Falcon. Seven days per week (C.1). All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B). Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW at 360-902-2739 with area fished, total Chinook and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW at 360-902-2739 with area fished, total Chinook and halibut catch aboard, and destination. See compliance requirements and gear restrictions and definitions (C.2, C.3). When it is projected that 29,250 Chinook have been landed overall, or 9,225 Chinook have been landed in the area between the U.S/Canada border and the Queets River, or 9,525 Chinook have been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action modifying the open period to five days per week and adding landing and possession limits will be considered to ensure the guideline is not exceeded.	**U.S./Canada Border to Cape Falcon** • May 1 through earlier of June 30 or 39,300 Chinook, no more than 12,300 of which may be caught in the area between the U.S./Canada border and the Queets River. Seven days per week. Between Leadbetter Pt. **and** Cape Falcon, landing and possession limit of 125 Chinook per vessel per week (Friday through Thursday) (C.1). All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B). Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW at 360-902-2739 with area fished, total Chinook and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW at 360-902-2739 with area fished, total Chinook and halibut catch aboard, and destination. See compliance requirements and gear restrictions and definitions (C.2, C.3). When it is projected that 29,475 Chinook have been landed overall, or 9,225 Chinook have been landed in the area between the U.S/Canada border and the Queets River, inseason action modifying the open period to five days per week and adding landing and possession limits will be considered to ensure the guideline is not exceeded.	**U.S./Canada Border to Cape Falcon** • May 1 through earlier of June 30 or 35,000 Chinook. Five days per week, Friday through Tuesday with a landing and possession limit of 125 Chinook per vessel per open period (C.1). All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B). See compliance requirements and gear restrictions and definitions (C.2, C.3).

Cape Flattery, Mandatory Yelloweye Rockfish Conservation Area, and Columbia Control Zones closed (C.5). Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Under state law, vessels must report their catch on a state fish receiving ticket. Vessels fishing or in possession of salmon while fishing north of Leadbetter Point must land and deliver their fish within the area and north of Leadbetter Point. Vessels fishing or in possession of salmon while fishing south of Leadbetter Point must land and deliver their fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land their fish in Garibaldi, Oregon. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon must notify ODFW within one hour of delivery or prior to transport away from the port of landing by either calling 541-867-0300 Ext. 271 or sending notification via e-mail to nfalcon.trollreport@state.or.us. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8).

TABLE 1. Commercial troll management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 2 of 9)

A. SEASON ALTERNATIVE DESCRIPTIONS

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
U.S./Canada Border to Cape Falcon • July 1 through earlier of September 22 or attainment of the quota of 26,800 Chinook, no more than 10,700 of which may be caught in the area between the U.S./Canada border and the Queets River or 20,800 marked coho (C.8.d). July 1-7 then Friday through Tuesday July 10 through September 22 with a landing and possession limit of 50 Chinook and 50 coho per vessel per open period (C.1). Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW at 360-902-2739 with area fished, total Chinook, coho, and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW at 360-902-2739 with area fished, total Chinook, coho, and halibut catch aboard, and destination. When it is projected that 19,500 Chinook have been landed overall, or 8,025 Chinook have been landed in the area between the U.S./Canada border and the Queets River, inseason action modifying the open period to five days per week and adding landing and possession limits will be considered to ensure the guideline is not exceeded. No earlier than September 1, if at least 5,000 marked coho remain on the quota, inseason action may be considered to allow non-selective coho retention (C.8). All salmon, except no chum retention north of Cape Alava, Washington in August and September (C.7). Chinook minimum size limit of 28 inches total length (B, C.1). All coho must be marked except as noted above (C.8.d). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).	**U.S./Canada Border to Cape Falcon** • July 1 through earlier of September 15 or attainment of the quota of 19,700 Chinook, no more than 8,100 of which may be caught in the area between the U.S./Canada border and the Queets River, or 25,600 marked coho (C.8.d). July 1-7, then Friday through Tuesday July 10 through September 15 with a landing and possession limit of 40 Chinook and 30 coho per vessel per open period (C.1). Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW at 360-902-2739 with area fished, total Chinook, coho, and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW at 360-902-2739 with area fished, total Chinook, coho, and halibut catch aboard, and destination. When it is projected that 14,775 Chinook have been landed overall, or 6,075 Chinook have been landed in the area between the U.S./Canada border and the Queets River, inseason action modifying the open period to five days per week and adding landing and possession limits will be considered to ensure the guideline is not exceeded. All salmon, except no chum retention north of Cape Alava, Washington in August and September (C.7). Chinook minimum size limit of 28 inches total length (B, C.1). All coho must be marked (C.8.d). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).	**U.S./Canada Border to Cape Falcon** • July 1 through earlier of September 15 or 18,000 preseason Chinook guideline (C.8) or a 22,400 marked coho quota (C.8.d) July 1-7, then Friday through Tuesday July 10 through September 15 with a landing and possession limit of 30 Chinook and 20 coho per vessel per open period (C.1). All salmon, except no chum retention north of Cape Alava, Washington in August and September (C.7). Chinook minimum size limit of 28 inches total length (B, C.1). All coho must be marked except as noted above (C.8.d). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).

Mandatory Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones, and beginning August 9, Grays Harbor Control Zone closed (C.5). Vessels must land and deliver their fish within 24 hours of any closure of this fishery. Vessels fishing or in possession of salmon while fishing north of Leadbetter Point must land and deliver their fish within the area and north of Leadbetter Point. Vessels fishing or in possession of salmon while fishing south of Leadbetter Point must land and deliver their fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land their fish in Garibaldi, Oregon. Under state law, vessels must report their catch on a state fish receiving ticket. Oregon State regulations require all fishers landing salmon into Oregon from any fishery between Leadbetter Point, Washington and Cape Falcon, Oregon must notify ODFW within one hour of delivery or prior to transport away from the port of landing by either calling 541-867-0300 Ext. 271 or sending notification via e-mail to nfalcon.trollreport@state.or.us. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8).

TABLE 1. Commercial troll management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 3 of 9)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
South of Cape Falcon	**South of Cape Falcon**	**South of Cape Falcon**
Supplemental Management Information	**Supplemental Management Information**	**Supplemental Management Information**
1. Sacramento River Basin recreational fishery catch assumption: 55,808 adult Sacramento River fall Chinook (18.1% of the total allowable harvest). 2. Sacramento River fall Chinook spawning escapement of 342,820 adults. 3. Klamath River recreational fishery allocation: 13,619 adult Klamath River fall Chinook. 4. Klamath tribal allocation: 43,747 adult Klamath River fall Chinook. 5. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.	1. Sacramento River Basin recreational fishery catch assumption: 54,673 adult Sacramento River fall Chinook (17.3% of the total allowable harvest). 2. Sacramento River fall Chinook spawning escapement of 335,846 adults. 3. Klamath River recreational fishery allocation: 13,909 adult Klamath River fall Chinook. 4. Klamath tribal allocation: 43,641 adult Klamath River fall Chinook. 5. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.	1. Sacramento River Basin recreational fishery catch assumption: 53,367 adult Sacramento River fall Chinook (16.5% of the total allowable harvest). 2. Sacramento River fall Chinook spawning escapement of 327,827 adults. 3. Klamath River recreational fishery allocation: 13,377 adult Klamath River fall Chinook. 4. Klamath tribal allocation: 43,824 adult Klamath River fall Chinook. 5. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.
Cape Falcon to Humbug Mt. • April 1-August 26; • September 2-October 31 (C.9). Seven days per week, All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). All vessels fishing in the area must land their fish in the State of Oregon. See gear restrictions and definitions (C.2, C.3) and Oregon State regulations for a description of special regulations at the mouth of Tillamook Bay. Beginning September 2, no more than 50 Chinook per vessel per landing week (Thursday through Wednesday). In 2016, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length. Gear restrictions same as in 2015. This opening could be modified following Council review at its March 2016 meeting.	**Cape Falcon to Humbug Mt.** • April 1-August 26; • September 2-30 (C.9). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). All vessels fishing in the area must land their fish in the State of Oregon. See gear restrictions and definitions (C.2, C.3) and Oregon State regulations for a description of special regulations at the mouth of Tillamook Bay. Beginning September 2, no more than 65 Chinook per vessel per landing week (Thursday through Wednesday). In 2016, same as Alternative I.	**Cape Falcon to Humbug Mt.** • April 1-August 29; • September 10-October 10 (C.9). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). All vessels fishing in the area must land their fish in the State of Oregon. See gear restrictions and definitions (C.2, C.3) and Oregon State regulations for a description of special regulations at the mouth of Tillamook Bay. Beginning September 10, no more than 75 Chinook per vessel per landing week (Thursday through Wednesday). In 2016, same as Alternative I.

TABLE 1. Commercial troll management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 4 of 9)

A. SEASON ALTERNATIVE DESCRIPTIONS

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Humbug Mt. to OR/CA Border (Oregon KMZ) • April 1-May 31; • June 1 through earlier of June 30, or a 2,500 Chinook quota; • July 1 through earlier of July 31, or a 1,000 Chinook quota; • August 1 through earlier of August 26, or a 500 Chinook quota (C.9). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). Prior to June 1, all fish caught in this area must be landed and delivered in the State of Oregon. June 1 through August 26, single daily landing and possession limit 30 Chinook per vessel per day (C.8.g). Any remaining portion of the June and/or July Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period. All vessels fishing in this area must land and deliver all fish within this area or Port Orford, within 24 hours of any closure of this fishery, and prior to fishing outside of this area. Oregon State regulations require all fishers landing salmon from any quota managed season within this area to notify Oregon Dept. of Fish and Wildlife (ODFW) within 1 hour of delivery or prior to transport away from the port of landing by either calling (541) 867-0300 ext. 252 or sending notification via e-mail to KMZOR.trollreport@state.or.us. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). In 2016, the season will open March 15 for all salmon except coho, with a 28 inch Chinook minimum size limit. This opening could be modified following Council review at its March 2016 meeting.	**Humbug Mt. to OR/CA Border (Oregon KMZ)** • April 1-May 31; • June 1 through earlier of June 30, or a 2,000 Chinook quota; • July 1 through earlier of July 31, or a 800 Chinook quota; • August 1 through earlier of August 26, or a 500 Chinook quota (C.9). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). Prior to June 1, all fish caught in this area must be landed and delivered in the State of Oregon. June 1 through August 26 landing and possession limit of 30 Chinook per vessel per day (C.8.g). Any remaining portion of the June and/or July Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period. All vessels fishing in this area must land and deliver all fish within this area or Port Orford, within 24 hours of any closure of this fishery, and prior to fishing outside of this area. Oregon State regulations require all fishers landing salmon from any quota managed season within this area to notify Oregon Dept. of Fish and Wildlife (ODFW) within 1 hour of delivery or prior to transport away from the port of landing by either calling (541) 867-0300 ext. 252 or sending notification via e-mail to KMZOR.trollreport@state.or.us. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). In 2016, same as Alternative I.	**Humbug Mt. to OR/CA Border (Oregon KMZ)** • April 1-May 31; • June 1 through earlier of June 30, or a 1,500 Chinook quota; • July 1 through earlier of July 31, or a 500 Chinook quota; • August 1 through earlier of August 29, or a 500 Chinook quota (C.9). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). Prior to June 1, all fish caught in this area must be landed and delivered in the State of Oregon. June 1 through August 29 landing and possession limit of 20 Chinook per vessel per day (C.8.g). Any remaining portion of the June and/or July Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period. All vessels fishing in this area must land and deliver all fish within this area or Port Orford, within 24 hours of any closure of this fishery, and prior to fishing outside of this area. Oregon State regulations require all fishers landing salmon from any quota managed season within this area to notify Oregon Dept. of Fish and Wildlife (ODFW) within 1 hour of delivery or prior to transport away from the port of landing by either calling (541) 867-0300 ext. 252 or sending notification via e-mail to KMZOR.trollreport@state.or.us. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). In 2016, same as Alternative I.

TABLE 1. Commercial troll management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 5 of 9)

A. SEASON ALTERNATIVE DESCRIPTIONS

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
OR/CA Border to Humboldt South Jetty (California KMZ) • May 1 through earlier of May 31, or a 3,000 Chinook quota; • June 1 through earlier of June 30, or a 1,000 Chinook quota; • July 1 through earlier of July 31, or a 500 Chinook quota; • August 1 through earlier of August 29, or a 500 Chinook quota; • September 8 through earlier of September 30, or a 5,000 Chinook quota (C.9.b). Five days per week, Friday through Tuesday. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length through August 29, 28 inches thereafter (B, C.1). Landing and possession limit of 20 Chinook per vessel per day (C.8.g). Any remaining portion of the May, June and/or July Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period (C.8.c).	**OR/CA Border to Humboldt South Jetty (California KMZ)** • September 8 through earlier of September 30, or a 3,000 Chinook quota (C.9.b). Five days per week, Friday through Tuesday. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). Landing and possession limit of 30 Chinook per vessel per day (C.8.g).	**OR/CA Border to Humboldt South Jetty (California KMZ)** Closed (C.9.b).
All fish caught in this area must be landed within the area and within 24 hours of any closure of the fishery and prior to fishing outside the area (C.10). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). Klamath Control Zone closed (C.5.e). See California State regulations for additional closures adjacent to the Smith and Klamath rivers. When the fishery is closed between the OR/CA border and Humbug Mountain 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 (C.6).		
Humboldt South Jetty to Horse Mt. Closed.	**Humboldt South Jetty to Horse Mt.** Closed.	**Humboldt South Jetty to Horse Mt.** Closed.
Horse Mt. to Point Arena (Fort Bragg) • June 16-30; • July 9-31; • August 1-29; • September 1-30 (C.9.b). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). In 2016, the season will open April 16-30 for all salmon except coho, with a 27 inch Chinook minimum size limit and the same gear restrictions as in 2015. All fish caught in the area must be landed in the area. This opening could be modified following Council review at its March 2016 meeting.	**Horse Mt. to Point Arena (Fort Bragg)** • May 25-31; • June 9-30; • July 7-31; • August 1-17; • September 1-30 (C.9.b). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). In 2016, same as Alternative I.	**Horse Mt. to Point Arena (Fort Bragg)** • June 12-30; • July 7-31; • August 1-29 (C.9.b). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). In 2016, same as Alternative I.
All fish must be landed in California and offloaded within 24 hours of the August 29 closure (C.6). When the CA KMZ fishery is open, all fish caught in the area must be landed south of Horse Mountain (C.6). During September, all fish must be landed north of Point Arena (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).		

TABLE 1. Commercial troll management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 6 of 9)

A. SEASON ALTERNATIVE DESCRIPTIONS

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Pt. Arena to Pigeon Pt. (San Francisco) • May 1-31; • June 16-30; • July 9-31; • August 1-29; • September 1-30 (C.9.b). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length prior to September 1, 26 inches thereafter (B, C.1). All fish must be landed in California and offloaded within 24 hours of the August 29 closure (C.6). During September, all fish must be landed south of Point Arena (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). **Point Reyes to Point San Pedro (Fall Area Target Zone)** • October 1-2, 5-9, and 12-15. All salmon except coho (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). All fish caught in this area must be landed between Point Arena and Pigeon Point (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).	**Pt. Arena to Pigeon Pt. (San Francisco)** • May 1-31; • June 7-30; • July 9-31; • August 1-29; • September 1-30 (C.9.b). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length prior to September 1, 26 inches thereafter (B, C.1). All fish must be landed in California and offloaded within 24 hours of the August 29 closure (C.6). During September, all fish must be landed south of Point Arena (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). **Point Reyes to Point San Pedro (Fall Area Target Zone)** • October 1-2, 5-9, and 12-15. All salmon except coho (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). All fish caught in this area must be landed between Point Arena and Pigeon Point (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).	**Pt. Arena to Pigeon Pt. (San Francisco)** • May 1-31; • June 1-30; • July 7-31; • August 1-29 (C.9.b). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). All fish must be landed in California and offloaded within 24 hours of the August 29 closure (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).
Pigeon Point to U.S./Mexico Border (Monterey) • May 1-31; • June 16-30; • July 9-31; • August 1-29; • September 1-30 (C.9.b). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length prior to September 1, 26 inches thereafter (B, C.1). All fish must be landed in California and offloaded within 24 hours of the August 29 closure (C.6). During September, all fish must be landed south of Point Arena (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).	**Pigeon Point to U.S./Mexico Border (Monterey)** • May 1-31; • June 7-30; • July 7-31; • August 1-29; • September 1-30 (C.9.b). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length prior to September 1, 26 inches thereafter (B, C.1). All fish must be landed in California and offloaded within 24 hours of the August 29 closure (C.6). During September, all fish must be landed south of Point Arena (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).	**Pigeon Point to U.S./Mexico Border (Monterey)** • May 1-31; • June 1-30; • July 7-31; • August 1-29 (C.9.b). Seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). All fish must be landed in California and offloaded within 24 hours of the August 29 closure (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).
California State regulations require all salmon be made available to a California Department of Fish and Wildlife (CDFW) representative for sampling immediately at port of landing. Any person in possession of a salmon with a missing adipose fin, upon request by an authorized agent or employee of the CDFW, shall immediately relinquish the head of the salmon to the state. (California Fish and Game Code §8226)		

TABLE 1. Commercial troll management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 7 of 9)

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

		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
Cape Falcon to OR/CA Border		28.0	21.5	-	-	None
OR/CA Border to Humboldt South Jetty	Alt. I ≤ Aug. 29	27.0	20.5	-	-	None
	Alt. I ≥ Sept. 8	28.0	21.5	-	-	None
	Alt. II	28.0	21.5	-	-	None
Horse Mt. to Pt. Arena		27.0	20.5	-	-	None
Pt. Arena to U.S./Mexico Border	≤ Aug. 29	27.0	20.5	-	-	None
	≥ Sept. 1	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, landing/possession limit, or other special requirements for the area being fished and the area in which they are landed if the area is open or has been closed less than ~~96~~ 48 hours for that species of salmon. Salmon may be landed in an area that has been closed for a species of salmon more than ~~96~~ 48 hours only if they meet the minimum size, landing/possession limit, or other special requirements for the area in which they were caught. Salmon may not be filleted prior to landing.

Any person who is required to report a salmon landing by applicable state law must include on the state landing receipt for that landing both the number and weight of salmon landed by species. States may require fish landing/receiving tickets be kept on board the vessel for 90 days or more after landing to account for all previous salmon landings.

C.2. Gear Restrictions:
- a. Salmon may be taken only by hook and line using single point, single shank, barbless hooks.
- b. Cape Falcon, Oregon, to the OR/CA border: No more than 4 spreads are allowed per line.
- c. OR/CA 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.

C.3. Gear Definitions:
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.
Troll fishing gear defined: One or more lines that drag hooks behind a moving fishing vessel. In that portion of the fishery management area off Oregon and Washington, the line or lines must be affixed to the vessel and must not be intentionally disengaged from the vessel at any time during the fishing operation.
Spread defined: A single leader connected to an individual lure and/or bait.
Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90º angle.

C.4. Vessel Operation in Closed Areas with Salmon on Board:
- a. Except as provided under C.4.b below, it is unlawful for a vessel to have troll or recreational gear in the water while in 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.
- b. When Genetic Stock Identification (GSI) samples will be collected in an area closed to commercial salmon fishing, the scientific research permit holder shall notify NOAA OLE, USCG, CDFW and OSP at least 24 hours prior to sampling and provide the following information: the vessel name, date, location and time collection activities will be done. Any vessel collecting GSI samples in a closed area shall not possess any salmon other than those from which GSI samples are being collected. Salmon caught for collection of GSI samples must be immediately released in good condition after collection of samples.

TABLE 1. Commercial troll management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 8 of 9)

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

C.5. Control Zone Definitions:

a. *Cape Flattery Control Zone* - The area from Cape Flattery (48º23'00" N. lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava (48º10'00" N. lat.) and east of 125º05'00" W. long.

b. *Mandatory Yelloweye Rockfish Conservation Area* – The area in Washington Marine Catch Area 3 from 48°00.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°14.00' W. long. to 48°02.00' N. lat.; 125°16.50' W. long. to 48°00.00' N. lat.; 125°16.50' W. long. and connecting back to 48°00.00' N. lat.; 125°14.00' W. long.

c. *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° 55'36" N. lat., 124°10'51" W. long.).

d. *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.

e. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately six 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 six nautical miles south of the Klamath River mouth).

C.6. 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, the estimated time of arrival, and the specific reason the vessel is not able to meet special management area landing restrictions.

In addition to contacting the U.S. Coast Guard, vessels fishing south of the Oregon/California border must notify CDFW within one hour of leaving the management area by calling 800-889-8346 and providing the same information as reported to the U.S. Coast Guard. All salmon must be offloaded within 24 hours of reaching port.

C.7. 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 total length, 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. When halibut are caught and landed incidental to commercial salmon fishing by an IPHC license holder, any person who is required to report the salmon landing by applicable state law must include on the state landing receipt for that landing both the number of halibut landed, and the total dressed, head-on weight of halibut landed, in pounds, as well as the number and species of salmon landed.

License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone: 206-634-1838). Applicants must apply prior to mid-March 2016 for 2016 permits (*exact date to be set by the IPHC in early 2016*). Incidental harvest is authorized only during April, May, and June of the 2015 troll seasons and after June 30 in 2015 if quota remains and if announced on the NMFS hotline (phone: 800-662-9825 or 206-526-6667). WDFW, ODFW, and CDFW will monitor landings. If the landings are projected to exceed the 29,671 pound preseason IPHC allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to prohibit retention of halibut in the non-Indian salmon troll fishery.

Alternative I - May 1, 2015 through December 31, 2015 and April 1-30, 2016, license holders may land or possess no more than one Pacific halibut per each four Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio requirement, and no more than 12 halibut may be possessed or landed per trip. Pacific halibut retained must be no less than 32 inches in total length (with head on).

Alternative II - May 1, 2015 through December 31, 2015 and April 1-30, 2016, license holders may land or possess no more than one Pacific halibut per each five Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio requirement, and no more than 10 halibut may be possessed or landed per trip. Pacific halibut retained must be no less than 32 inches in total length (with head on).

Alternative III - May 1, 2015 through December 31, 2015 and April 1-30, 2016, license holders may land or possess no more than one Pacific halibut per each five Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio requirement, and no more than 8 halibut may be possessed or landed per trip. Pacific halibut retained must be no less than 32 inches in total length (with head on).

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

Incidental Pacific halibut catch regulations in the commercial salmon troll fishery adopted for 2015, prior to any 2015 inseason action, will be in effect when incidental Pacific halibut retention opens on April 1, 2016 unless otherwise modified by inseason action at the March 2016 Council meeting.

a. "C-shaped" yelloweye rockfish conservation area is an area to be voluntarily avoided for salmon trolling. NMFS and the Council request salmon trollers voluntarily avoid this area in order to protect yelloweye rockfish. The area is defined in the Pacific Council Halibut Catch Sharing Plan in the North Coast subarea (Washington 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.8. 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 through June non-Indian commercial troll harvest guideline north of Cape Falcon may be transferred to the July through September harvest guideline if the transfer would not result in exceeding preseason impact expectations on any stocks.
b. Chinook remaining from the June and/or July non-Indian commercial troll quotas in the Oregon KMZ may be transferred to the Chinook quota for the next open period if the transfer would not result in exceeding preseason impact expectations on any stocks.
c. Chinook remaining from the May, June and/or July non-Indian commercial troll quotas in the California KMZ may be transferred to the Chinook quota for the next open period if the transfer would not result in exceeding preseason impact expectations on any stocks.
d. NMFS may transfer fish between the recreational and commercial fisheries north of Cape Falcon if there is agreement among the areas' representatives on the Salmon Advisory Subpanel (SAS), and if the transfer would not result in exceeding preseason impact expectations on any stocks.
e. At the March 2016 meeting, the Council will consider inseason recommendations for special regulations for any experimental fisheries (proposals must meet Council protocol and be received in November 2015).
f. If retention of unmarked coho is permitted by inseason action, the allowable coho quota will be adjusted to ensure preseason projected impacts on all stocks is not exceeded.
g. Landing limits may be modified inseason to sustain season length and keep harvest within overall quotas.

C.9. State Waters Fisheries: Consistent with Council management objectives:
a. The State of Oregon may establish additional late-season fisheries in state waters.
b. The State of California may establish limited fisheries in selected state waters.
Check state regulations for details.

C.10. For the purposes of California Fish and Game Code, Section 8232.5, the definition of the Klamath Management Zone (KMZ) for the ocean salmon season shall be that area from Humbug Mountain, Oregon, to Horse Mountain, California.

TABLE 2. Recreational management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 1 of 9)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
North of Cape Falcon	**North of Cape Falcon**	**North of Cape Falcon**
Supplemental Management Information	**Supplemental Management Information**	**Supplemental Management Information**
1. Overall non-Indian TAC: 131,000 (non-mark-selective equivalent of 125,000) Chinook and 180,000 coho marked with a healed adipose fin clip (marked). 2. Recreational TAC: 64,000 (non-mark selective equivalent of 58,000) Chinook and 159,200 marked coho; all retained coho must be marked. 2,000 Chinook were traded to commercial troll for 8,000 coho which were added to the quota between Leadbetter Pt. and Cape Falcon. 4. No Area 4B add-on fishery. 5. Buoy 10 fishery opens August 1 with an expected landed catch of 63,100 marked coho in August and September. 6. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.	1. Overall non-Indian TAC: 121,000 (non-mark-selective equivalent of 115,000) Chinook and 160,000 coho marked with a healed adipose fin clip (marked). 2. Recreational TAC: 62,000 (non-mark selective equivalent of 56,000) Chinook and 134,400 marked coho; all retained coho must be marked. 4. No Area 4B add-on fishery. 5. Buoy 10 fishery opens August 1 with an expected landed catch of 66,300 marked coho in August and September. 6. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.	1. Overall non-Indian TAC: 111,000 (non-mark-selective equivalent of 105,000) Chinook and 140,000 coho marked with a healed adipose fin clip (marked). 2. Recreational TAC: 58,000 (non-mark selective equivalent of 52,000) Chinook and 117,600 marked coho; all retained coho must be marked. 4. No Area 4B add-on fishery. 5. Buoy 10 fishery opens August 1 with an expected landed catch of 70,700 marked coho in August and September. 6. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.
U.S./Canada Border to Queets Rivers • May 15-16, May 22-23, and May 30-June 12 or a coastwide marked Chinook quota of 10,000 (C.5). Seven days per week. Two fish per day, all salmon except coho. All Chinook must be marked with a healed adipose fin clip (C.1). Chinook 24-inch total length minimum size limit (B). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).	**U.S./Canada Border to Queets Rivers** • May 22-23 and June 6-19 or a coastwide marked Chinook quota of 10,000 (C.5). Seven days per week. Two fish per day, all salmon except coho. All Chinook must be marked with a healed adipose fin clip (C.1). Chinook 24-inch total length minimum size limit (B). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).	**U.S./Canada Border to Queets Rivers** • June 13-26 or a coastwide marked Chinook quota of 10,000 (C.5). Seven days per week. Two fish per day, all salmon except coho. All Chinook must be marked with a healed adipose fin clip (C.1). Chinook 24-inch total length minimum size limit (B). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).
Queets Rivers to Leadbetter Point • May 30 through earlier of June 12 or a coastwide marked Chinook quota of 10,000 (C.5). Seven days per week. Two fish per day, all salmon except coho. All Chinook must be marked with a healed adipose fin clip (C.1). Chinook 24-inch total length minimum size limit (B). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).	**Queets Rivers to Leadbetter Point** • June 6-19 or a coastwide marked Chinook quota of 10,000 (C.5). Seven days per week. Two fish per day, all salmon except coho. All Chinook must be marked with a healed adipose fin clip (C.1). Chinook 24-inch total length minimum size limit (B). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).	**Queets Rivers to Leadbetter Point** • June 13-26 or a coastwide marked Chinook quota of 10,000 (C.5). Seven days per week. Two fish per day, all salmon except coho. All Chinook must be marked with a healed adipose fin clip (C.1). Chinook 24-inch total length minimum size limit (B). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).

TABLE 2. Recreational management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 2 of 9)

A. SEASON ALTERNATIVE DESCRIPTIONS

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Leadbetter Point to Cape Falcon • May 30 through earlier of June 12 or a coastwide marked Chinook quota of 10,000 (C.5). Seven days per week. Two fish per day, all salmon except coho. All Chinook must be marked with a healed adipose fin clip (C.1). Chinook 24-inch total length minimum size limit (B). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).	**Leadbetter Point to Cape Falcon** • June 6-19 or a coastwide marked Chinook quota of 10,000 (C.5). Seven days per week. Two fish per day, all salmon except coho. All Chinook must be marked with a healed adipose fin clip (C.1). Chinook 24-inch total length minimum size limit (B). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).	**Leadbetter Point to Cape Falcon** • June 13-26 or a coastwide marked Chinook quota of 10,000 (C.5). Seven days per week. Two fish per day, all salmon except coho. All Chinook must be marked with a healed adipose fin clip (C.1). Chinook 24-inch total length minimum size limit (B). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook recreational TAC for north of Cape Falcon (C.5).
U.S./Canada Border to Cape Alava (Neah Bay) • June 13 through earlier of September 30 or 15,720 marked coho subarea quota with a subarea guideline of 8,400 Chinook (C.5). Seven days per week. All salmon except no chum beginning August 1; two fish per day plus two additional pink. All coho must be marked (C.1). Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line (C.4.a) during Council managed ocean fishery. See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).	**U.S./Canada Border to Cape Alava (Neah Bay)** • June 20 through earlier of September 30 or 13,980 marked coho subarea quota with a subarea guideline of 8,100 Chinook (C.5). Seven days per week. All salmon except no chum beginning August 1; two fish per day plus two additional pink. All coho must be marked (C.1). Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line (C.4.a) during Council managed ocean fishery. See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).	**U.S./Canada Border to Cape Alava (Neah Bay)** • June 27 through earlier of September 20 or 12,230 marked coho subarea quota with a subarea guideline of 7,500 Chinook (C.5). Seven days per week. All salmon except no chum beginning August 1; two fish per day plus two additional pink. All coho must be marked (C.1). Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line (C.4.a) during Council managed ocean fishery. See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).
Cape Alava to Queets River (La Push Subarea) • June 13 through earlier of September 30 or 3,830 marked coho subarea quota with a subarea guideline of 2,600 Chinook (C.5). • October 1 through earlier of October 11 or 100 marked coho quota or 100 Chinook quota (C.5) in the area north of 47°50'00 N. lat. and south of 48°00'00" N. lat. Seven days per week. All salmon, two fish per day plus two additional pink. All coho must be marked (see *Ocean Boat Limits*, C.1). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).	**Cape Alava to Queets River (La Push Subarea)** • June 20 through earlier of September 20 or 3,390 marked coho subarea quota with a subarea guideline of 2,500 Chinook (C.5). • September 27 through earlier of October 11 or 100 marked coho quota or 100 Chinook quota (C.5) in the area north of 47°50'00 N. lat. and south of 48°00'00" N. lat. Seven days per week. All salmon, two fish per day plus two additional pink. All coho must be marked (see *Ocean Boat Limits*, C.1). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).	**Cape Alava to Queets River (La Push Subarea)** • June 27 through earlier of September 20 or 2,960 marked coho subarea quota with a subarea guideline of 2,300 Chinook (C.5). • September 27 through earlier of October 11 or 100 marked coho quota or 100 Chinook quota (C.5) in the area north of 47°50'00 N. lat. and south of 48°00'00" N. lat. Seven days per week. All salmon, two fish per day plus two additional pink. All coho must be marked (see *Ocean Boat Limits*, C.1). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).

TABLE 2. Recreational management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 3 of 9)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Queets River to Leadbetter Point (Westport Subarea) • June 13 through earlier of September 30 or 55,950 marked coho subarea quota with a subarea guideline of 27,900 Chinook (C.5). Seven days per week. All salmon; two fish per day, no more than one of which can be a Chinook. All coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Grays Harbor Control Zone closed beginning August 11 (C.4.b). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).	**Queets River to Leadbetter Point (Westport Subarea)** • June 20 through earlier of September 30 or 49,730 marked coho subarea quota with a subarea guideline of 26,900 Chinook (C.5). Seven days per week. All salmon; two fish per day, no more than one of which can be a Chinook. All coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Grays Harbor Control Zone closed beginning August 11 (C.4.b). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).	**Queets River to Leadbetter Point (Westport Subarea)** • June 27 through earlier of September 20 or 43,510 marked coho subarea quota with a subarea guideline of 24,800 Chinook (C.5). Seven days per week. All salmon; two fish per day, no more than one of which can be a Chinook. All coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Grays Harbor Control Zone closed beginning August 11 (C.4.b). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).
Leadbetter Point to Cape Falcon (Columbia River Subarea) • June 13 through earlier of September 30 or 83,600 marked coho subarea quota with a subarea guideline of 15,000 Chinook (C.5). Seven days per week. All salmon; two fish per day, no more than one of which can be a Chinook. All coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Columbia Control Zone closed (C.4.c. Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).	**Leadbetter Point to Cape Falcon (Columbia River Subarea)** • June 20 through earlier of September 30 or 67,200 marked coho subarea quota with a subarea guideline of 14,400 Chinook (C.5). Seven days per week. All salmon; two fish per day, no more than one of which can be a Chinook. All coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Columbia Control Zone closed (C.4.c). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).	**Leadbetter Point to Cape Falcon (Columbia River Subarea)** • June 27 through earlier of September 30 or 58,800 marked coho subarea quota with a subarea guideline of 13,300 Chinook (C.5). Seven days per week. All salmon; two fish per day, no more than one of which can be a Chinook. All coho must be marked (C.1). See gear restrictions and definitions (C.2, C.3). Columbia Control Zone closed (C.4.c). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).

TABLE 2. Recreational management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 4 of 9)

A. SEASON ALTERNATIVE DESCRIPTIONS

South of Cape Falcon	**South of Cape Falcon**	**South of Cape Falcon**
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Supplemental Management Information	**Supplemental Management Information**	**Supplemental Management Information**
1. Sacramento River Basin recreational fishery catch assumption: 55,808 adult Sacramento River fall Chinook (18.1% of the total allowable harvest). 2. Sacramento River fall Chinook spawning escapement of 342,820 adults. 3. Klamath River recreational fishery allocation: 13,619 adult Klamath River fall Chinook. 4. Klamath tribal allocation: 43,747 adult Klamath River fall Chinook. 5. Overall recreational coho TAC: 60,000 coho marked with a healed adipose fin clip (marked), and 10,000 coho in the non-mark-selective coho fishery. 6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.	1. Sacramento River Basin recreational fishery catch assumption: 54,673 adult Sacramento River fall Chinook (17.3% of the total allowable harvest). 2. Sacramento River fall Chinook spawning escapement of 335,846 adults. 3. Klamath River recreational fishery allocation: 13.909 adult Klamath River fall Chinook. 4. Klamath tribal allocation: 43,641 adult Klamath River fall Chinook. 5. Overall recreational coho TAC: 52,500 coho marked with a healed adipose fin clip (marked), and 15,000 coho in the non-mark-selective coho fishery. 6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.	1. Sacramento River Basin recreational fishery catch assumption: 53,367 adult Sacramento River fall Chinook (16.5% of the total allowable harvest). 2. Sacramento River fall Chinook spawning escapement of 327,827 adults. 3. Klamath River recreational fishery allocation: 13,377 adult Klamath River fall Chinook. 4. Klamath tribal allocation: 43,824 adult Klamath River fall Chinook. 5. Overall recreational coho TAC: 40,000 coho marked with a healed adipose fin clip (marked), and 8,000 coho in the non-mark-selective coho fishery. 6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission.
Cape Falcon to Humbug Mt. • March 15 through October 31 (C.6), except as provided below during the July all-salmon mark-selective and September non-mark-selective coho fisheries. Seven days per week. All salmon except coho; two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). • Non-mark-selective coho fishery: September 4 through the earlier of September 30 or a landed catch of 10,000 coho (C.5). Seven days per week. All salmon, two fish per day (C.5). The all salmon except coho season reopens the earlier of October 1 or attainment of the coho quota (C.5). In 2016, the season between Cape Falcon and Humbug Mountain will open March 15 for all salmon except coho, two fish per day (B, C.1, C.2, C.3).	**Cape Falcon to Humbug Mt.** • March 15 through October 31 (C.6), except as provided below during the July all-salmon mark-selective and September non-mark-selective coho fisheries. Seven days per week. All salmon except coho; two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). • Non-mark-selective coho fishery: September 4 through the earlier of September 30 or a landed catch of 15,000 coho (C.5). Seven days per week. All salmon, two fish per day (C.5). The all salmon except coho season reopens the earlier of October 1 or attainment of the coho quota (C.5). In 2016, same as Alternative I.	**Cape Falcon to Humbug Mt.** • March 15 through October 31 (C.6), except as provided below during the July all-salmon mark-selective and September non-mark-selective coho fisheries. Seven days per week. All salmon except coho; two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). • Non-mark-selective coho fishery: September 3 through the earlier of September 30 or a landed catch of 8,000 coho (C.5). Open Thursday through Saturday, All salmon, two fish per day (C.5); Open Sunday through Wednesday, All salmon except coho, two fish per day (C.5), The all salmon except coho season reopens the earlier of October 1 or attainment of the coho quota (C.5). In 2016, same as Alternative I
Fishing in the Stonewall Bank yelloweye rockfish conservation area restricted to trolling only on days the all depth recreational halibut fishery is open (call the halibut fishing hotline 1-800-662-9825 for specific dates) (C.3.b, C.4.d).		

TABLE 2. Recreational management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 5 of 9)

A. SEASON ALTERNATIVE DESCRIPTIONS

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Cape Falcon to OR/CA Border • All-salmon mark-selective coho fishery: June 27 through earlier of August 9 or a landed catch of 60,000 marked coho. Seven days per week. All salmon, two fish per day. All retained coho must be marked (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). Any remainder of the mark selective coho quota will be transferred on an impact neutral basis to the September non-selective coho quota from Cape Falcon to Humbug Mountain (C.5). The all salmon except coho season reopens the earlier of August 10 or attainment of the coho quota. Fishing in the Stonewall Bank Yelloweye Rockfish Conservation Area restricted to trolling only on days the all depth recreational halibut fishery is open (call the halibut fishing hotline 1-800-662-9825 for specific dates) (C.3.b, C.4.d).	**Cape Falcon to OR/CA Border** • All-salmon mark-selective coho fishery: June 27 through earlier of July 31 or a landed catch of 52,500 marked coho. Seven days per week. All salmon, two fish per day. All retained coho must be marked (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). Any remainder of the mark selective coho quota will be transferred on an impact neutral basis to the September non-selective coho quota from Cape Falcon to Humbug Mountain (C.5). The all salmon except coho season reopens the earlier of August 1 or attainment of the coho quota. Fishing in the Stonewall Bank Yelloweye Rockfish Conservation Area restricted to trolling only on days the all depth recreational halibut fishery is open (call the halibut fishing hotline 1-800-662-9825 for specific dates) (C.3.b, C.4.d).	**Cape Falcon to OR/CA Border** • All-salmon mark-selective coho fishery: July 1 through earlier of July 31 or a landed catch of 40,000 marked coho. Seven days per week. All salmon, two fish per day. All retained coho must be marked (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). Any remainder of the mark selective coho quota will be transferred on an impact neutral basis to the September non-selective coho quota from Cape Falcon to Humbug Mountain (C.5). The all salmon except coho season reopens the earlier of August 1 or attainment of the coho quota. Fishing in the Stonewall Bank Yelloweye Rockfish Conservation Area restricted to trolling only on days the all depth recreational halibut fishery is open (call the halibut fishing hotline 1-800-662-9825 for specific dates) (C.3.b, C.4.d).
Humbug Mt. to OR/CA Border (Oregon KMZ) • May 1 through September 7 (C.6). All salmon except coho, except as noted above in the all-salmon mark-selective coho fishery. Seven days per week, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).	**Humbug Mt. to OR/CA Border (Oregon KMZ)** • May 9 through September 7 (C.6). All salmon except coho, except as noted above in the all-salmon mark-selective coho fishery. Seven days per week, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).	**Humbug Mt. to OR/CA Border (Oregon KMZ)** • May 22 through September 7 (C.6). All salmon except coho, except as noted above in the all-salmon mark-selective coho fishery. Seven days per week, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3).
OR/CA Border to Horse Mt. (California KMZ) • May 1 through September 7 (C.6). Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3). Klamath Control Zone closed in August (C.4.e). See California State regulations for additional closures adjacent to the Smith, Eel, and Klamath rivers.	**OR/CA Border to Horse Mt. (California KMZ)** • May 9 through September 7 (C.6). Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3). Klamath Control Zone closed in August (C.4.e). See California State regulations for additional closures adjacent to the Smith, Eel, and Klamath rivers.	**OR/CA Border to Horse Mt. (California KMZ)** • May 22 through September 7 (C.6). Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). Klamath Control Zone closed in August (C.4.e). See California State regulations for additional closures adjacent to the Smith, Eel, and Klamath rivers.

TABLE 2. Recreational management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 6 of 9)

A. SEASON ALTERNATIVE DESCRIPTIONS

ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Horse Mt. to Point Arena (Fort Bragg) • April 4 through November 8. Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3). In 2016, season opens April 2 for all salmon except coho, two fish per day (C.1). Chinook minimum size limit of 20 inches total length (B); and the same gear restrictions as in 2015 (C.2, C.3).	**Horse Mt. to Point Arena (Fort Bragg)** • April 4 through November 8. Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 20 inches total length (B). See gear restrictions and definitions (C.2, C.3). In 2016, same as Alternative I.	**Horse Mt. to Point Arena (Fort Bragg)** • April 4 through September 7 (C.6). Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 20 inches total length through April 30, 24 inches thereafter (B). See gear restrictions and definitions (C.2, C.3). In 2016, season opens April 2 for all salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2015 (C.2, C.3).
Point Arena to Pigeon Point (San Francisco) • April 4 through November 8. Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length through April 30, 20 inches thereafter (B). See gear restrictions and definitions (C.2, C.3). In 2016, season opens April 2 for all salmon except coho, two fish per day (C.1). Chinook minimum size limit of 20 inches total length (B); and the same gear restrictions as in 2015 (C.2, C.3).	**Point Arena to Pigeon Point (San Francisco)** • April 4 through November 8. Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length through April 30, 20 inches thereafter (B). See gear restrictions and definitions (C.2, C.3). In 2016, season opens April 2 for all salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2015 (C.2, C.3).	**Point Arena to Pigeon Point (San Francisco)** • April 4 through September 7 (C.6). Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). In 2016, same as Alternative II.
Pigeon Point to U.S./Mexico Border (Monterey South) • April 4 through October 4. Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length through April 30, 20 inches thereafter (B). See gear restrictions and definitions (C.2, C.3). In 2016, season opens April 2 for all salmon except coho, two fish per day (C.1). Chinook minimum size limit of 20 inches total length (B); and the same gear restrictions as in 2015 (C.2, C.3).	**Pigeon Point to U.S./Mexico Border (Monterey)** • April 4 through October 4. Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length through May 31, 20 inches thereafter (B). See gear restrictions and definitions (C.2, C.3). In 2016, season opens April 2 for all salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2015 (C.2, C.3).	**Pigeon Point to U.S./Mexico Border (Monterey)** • April 4 through September 7 (C.6). Seven days per week. All salmon except coho, two fish per day (C.1). Chinook minimum size limit of 24 inches total length (B). See gear restrictions and definitions (C.2, C.3). In 2016, same as Alternative II.
California State regulations require all salmon be made available to a CDFW representative for sampling immediately at port of landing. Any person in possession of a salmon with a missing adipose fin, upon request by an authorized agent or employee of the CDFW, shall immediately relinquish the head of the salmon to the state. (California Code of Regulations Title 14 Section 1.73)		

TABLE 2. Recreational management Alternatives adopted by the Council for non-Indian ocean salmon fisheries**,** 2015. (Page 7 of 9)

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

Area (when open)		Chinook	Coho	Pink
North of Cape Falcon		24.0	16.0	None
Cape Falcon to Humbug Mt.		24.0	16.0	None
Humbug Mt. to OR/CA Border		24.0	16.0	None
OR/CA Border to Horse Mountain	Alt. I & II	20.0	-	20.0
	Alt. III	24.0	-	24.0
Horse Mt. to Pt. Arena	Alt. I & II	20.0	-	20.0
	Alt. III ≤ April 30	20.0	-	20.0
	Alt. III ≥ May 1	24.0	-	24.0
Pt. Arena to Pigeon Pt.	Alt. I & II ≤ April 30	24.0	-	24.0
	Alt. I & II ≥ May 1	20.0	-	20.0
	Alt. III	24.0	-	24.0
Pigeon Pt. To U.S./Mexico Border	Alt. I ≤ April 30	24.0	-	24.0
	Alt. I ≥ May 1	20.0	-	20.0
	Alt. II ≤ May 31	24.0	-	24.0
	Alt. II ≥ June 1	20.0	-	20.0
	Alt. III	24.0	-	24.0

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. Salmon may not be filleted prior to landing.

Ocean Boat Limits: Off the coast of Washington, Oregon, and California, each fisher aboard a vessel may continue to use angling gear until the combined daily limits of Chinook and coho salmon for all licensed and juvenile anglers aboard have been attained (additional state restrictions may apply).

TABLE 2. Recreational management Alternatives adopted by the Council for non-Indian ocean salmon fisheries, 2015. (Page 8 of 9)

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.2. Gear Restrictions: Salmon may be taken only by hook and line using barbless hooks. 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 no more than two 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. *Horse Mt., California, to Pt. Conception, California*: Single point, single shank, barbless circle hooks (see gear definitions below) are required when fishing with bait by any means other than trolling, and no more than two such hooks shall be used. When angling with two hooks, the distance between the hooks must not exceed five 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.

C.3. Gear Definitions:

a. *Recreational fishing gear defined*: Off Oregon and Washington, angling tackle consists of a single line that must be attached to a rod and reel held by hand or closely attended; the rod and reel must be held by hand while playing a hooked fish. No person may use more than one rod and line while fishing off Oregon or Washington. Off California, the line must be attached to a rod and reel held by hand or closely attended; weights directly attached to a line may not exceed four pounds (1.8 kg). While fishing off California north of Pt. Conception, no person fishing for salmon, and no person fishing from a boat with salmon on board, may use more than one rod and line. Fishing includes any activity which can reasonably be expected to result in the catching, taking, or harvesting of fish.

b. *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. *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.

C.4. Control Zone Definitions:

a. *The Bonilla-Tatoosh Line*: 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°24'37" N. lat., 124°44'37" W. long.), then in a straight line to Bonilla Pt. (48°35'39" N. lat., 124°42'58" W. long.) on Vancouver Island, British Columbia.

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° 55'36" N. lat., 124°10'51" W. long.).

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. *Stonewall Bank Yelloweye Rockfish Conservation Area*: The area defined by the following coordinates in the order listed:
   44°37.46' N. lat.; 124°24.92' W. long.
   44°37.46' N. lat.; 124°23.63' W. long.
   44°28.71' N. lat.; 124°21.80' W. long.
   44°28.71' N. lat.; 124°24.10' W. long.
   44°31.42' N. lat.; 124°25.47' W. long.
   and connecting back to 44°37.46' N. lat.; 124°24.92' W. long.

e. *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).

TABLE 2. Recreational management measures adopted by the Council for non-Indian ocean salmon fisheries, 2014. (Page 9 of 9)
C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.5. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines, and season duration. In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

a. Actions could include modifications to bag limits, or days open to fishing, and extensions or reductions in areas open to fishing.
b. Coho may be transferred 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 Council's SAS recreational representatives north of Cape Falcon, and if the transfer would not result in exceeding preseason impact expectations on any stocks.
c. Chinook and coho may be transferred between the recreational and commercial fisheries north of Cape Falcon if there is agreement among the representatives of the Salmon Advisory Subpanel (SAS), and if the transfer would not result in exceeding preseason impact expectations on any stocks.
d. Fishery managers may consider inseason action modifying regulations restricting retention of unmarked coho. To remain consistent with preseason expectations, any inseason action shall consider, if significant, the difference between observed and preseason forecasted mark rates. Such a consideration may also include a change in bag limit of two salmon, no more than one of which may be a coho.
e. Marked coho remaining from the Cape Falcon to OR/CA border recreational mark-selective coho quota may be transferred inseason to the Cape Falcon to Humbug Mt. non-mark-selective recreational fishery if the transfer would not result in exceeding preseason impact expectations on any stocks.

C.6. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the States of Washington, Oregon, and California may establish limited seasons in state waters. Check state regulations for details.

TABLE 3. Treaty Indian troll management Alternatives adopted by the Council for ocean salmon fisheries, 2015. (Page 1 of 2)		
A. SEASON ALTERNATIVE DESCRIPTIONS		
ALTERNATIVE I	ALTERNATIVE II	ALTERNATIVE III
Supplemental Management Information	**Supplemental Management Information**	**Supplemental Management Information**
1. Overall Treaty-Indian TAC: 66,250 Chinook and 50,000 coho. 2. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.	1. Overall Treaty-Indian TAC: 54,000 Chinook and 40,000 coho. 2. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.	1. Overall Treaty-Indian TAC: 40,000 Chinook and 30,000 coho. 2. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.
• May 1 through the earlier of June 30 or 33,125 Chinook quota. All salmon except coho. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season (C.5). See size limit (B) and other restrictions (C). • July 1 through the earlier of September 15, or 33,125 Chinook quota, or 50,000 coho quota. All Salmon. See size limit (B) and other restrictions (C).	• May 1 through the earlier of June 30 or 27,000 Chinook quota. All salmon except coho. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season. See size limit (B) and other restrictions (C). • July 1 through the earlier of September 15, or 27,000 Chinook quota, or 40,000 coho quota. All salmon. See size limit (B) and other restrictions (C).	• May 1 through the earlier of June 30 or 20,000 Chinook quota. All salmon except coho. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season. See size limit (B) and other restrictions (C). • July 1 through the earlier of September 15, or 20,000 Chinook quota, or 30,000 coho quota. All salmon. See size limit (B) and other restrictions (C).

TABLE 3. Treaty Indian troll management Alternatives adopted by the Council for ocean salmon fisheries, 2015. (Page 2 of 2)

B. MINIMUM SIZE (Inches)

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	24.0 (61.0 cm)	18.0 (45.7 cm)	16.0 (40.6 cm)	12.0 (30.5 cm)	None

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Tribe and Area Boundaries. 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.
S'KLALLAM - Washington State Statistical Area 4B (All).

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.

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.

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.

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.

C.2. Gear restrictions
- a. Single point, single shank, barbless hooks are required in all fisheries.
- b. No more than eight fixed lines per boat.
- c. No more than four hand held lines per person in the Makah area fishery (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.)

C.3. Quotas
- a. The quotas include troll catches by the S'Klallam and Makah tribes in Washington State Statistical Area 4B from May 1 through September 15.
- b. 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 2004-2014. Fish taken during this fishery are to be counted against treaty troll quotas established for the 2015 season (estimated harvest during the October ceremonial and subsistence fishery: 20 Chinook; 40 coho).

C.4. Area Closures
- a. The area within a six 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.
- b. A closure within two 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.

C.5. 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 through June treaty-Indian ocean troll harvest guideline north of Cape Falcon may be transferred to the July through September harvest guideline on a fishery impact equivalent basis.

TABLE 4. Chinook and coho harvest quotas and guidelines (*) for 2015 ocean salmon fishery management Alternatives adopted by the Council.

Fishery or Quota Designation	Chinook for Alternative I	Chinook for Alternative II	Chinook for Alternative III	Coho for Alternative I	Coho for Alternative II	Coho for Alternative III
NORTH OF CAPE FALCON						
TREATY INDIAN OCEAN TROLL[a/]						
U.S./Canada Border to Cape Falcon (All Except Coho)	33,125	27,000	20,000	-	-	-
U.S./Canada Border to Cape Falcon (All Species)	33,125	27,000	20,000	50,000	40,000	30,000
Subtotal Treaty Indian Ocean Troll	66,250	54,000	40,000	50,000	40,000	30,000
NON-INDIAN COMMERCIAL TROLL[b/]						
U.S./Canada Border to Cape Falcon (All Except Coho)	40,200	39,300	35,000	-	-	-
U.S./Canada Border to Cape Falcon (All Species)	26,800	19,700	18,000	20,800	25,600	22,400
Subtotal Non-Indian Commercial Troll	67,000	59,000	53,000	20,800	25,600	22,400
RECREATIONAL						
U.S./Canada Border to Cape Falcon (All Except Coho)[c/]	10,000	10,000	10,000	-	-	-
U.S./Canada Border to Cape Alava[b/]	8,400 *	8,100 *	7,500 *	15,720	13,980	12,230
Cape Alava to Queets River[b/]	2,700 *	2,600 *	2,400 *	3,930	3,490	3,060
Queets River to Leadbetter Pt.[b/]	27,900 *	26,900 *	24,800 *	55,950	49,730	43,510
Leadbetter Pt. to Cape Falcon[b/d/]	15,000 *	14,400 *	13,300 *	83,600	67,200	58,800
Subtotal Recreational	64,000	62,000	58,000	159,200	134,400	117,600
TOTAL NORTH OF CAPE FALCON	197,250	175,000	151,000	230,000	200,000	170,000
SOUTH OF CAPE FALCON						
COMMERCIAL TROLL[a/]						
Humbug Mt. to OR/CA Border	4,000	3,300	2,500	-	-	-
OR/CA Border to Humboldt South Jetty	10,000	3,000	-	-	-	-
Subtotal Commercial Troll	14,000	6,300	2,500	-	-	-
RECREATIONAL						
Cape Falcon to Oregon/California Border	-	-	-	70,000 [e/]	67,500 [e/]	48,000 [e/]
TOTAL SOUTH OF CAPE FALCON	14,000	6,300	2,500	70,000	67,500	48,000

a/ Quotas are non-mark selective for both Chinook and coho.

b/ Quotas are non-mark-selective for Chinook and mark-selective for coho.

c/ Quotas are mark-selective for Chinook, equivalent to unmarked quotas of 4,000.

d/ Does not include Buoy 10 fishery. Expected catch in August and September: Alternative I - 63,100 marked coho; Alternative II - 66,300 marked coho; Alternative III - 70,700 marked coho.

e/ The quota consists of both mark-selective and non-mark-selective quotas: 60,000 and 10,000 in Alternative 1; 52,500 and 15,000 in Alternative II; 40,000 and 8,000 in Alternative III, respectively.

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2015 ocean fishery Alternatives adopted by the Council.[a/] (Page 1 of 3)

Key Stock/Criteria	Projected Ocean Escapement[b/] or Other Criteria (Council Area Impacts in Parens) Alternative I	Alternative II	Alternative III	Spawner Objective or Other Comparative Standard as Noted
			CHINOOK	
Columbia Upriver Brights	508.7	509.4	510.0	74.0 Minimum ocean escapement to attain 60.0 adults over McNary Dam, with normal distribution and no mainstem harvest.
Mid-Columbia Brights	115.2	115.4	115.5	14.9 Minimum ocean escapement to attain 0.9 adults for Umatilla and 4.5 for Little White Salmon and Bonneville Hatchery egg-takes, assuming average conversion and no mainstem harvest.
Columbia Lower River Hatchery Tules	95.2	96.9	98.6	25.0 Minimum ocean escapement to attain 14.5 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest.
Columbia Lower River Natural Tules (threatened)	**41.5%**	39.9%	38.2%	≤ 41.0% Total adult equivalent fishery exploitation rate (2015 NMFS ESA guidance).
Columbia Lower River Wild[c/] (threatened)	19.3	19.3	19.3	6.9 Minimum ocean escapement to attain MSY spawner goal of 5.7 for N. Lewis River fall Chinook (NMFS ESA consultation standard).
Spring Creek Hatchery Tules	161.1	166.7	172.7	8.2 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	50.6%	46.1%	43.2%	≤ 70.0% Of 1988-1993 base period exploitation rate for all ocean fisheries (NMFS ESA consultation standard).
Klamath River Fall	40,700	40,700	40,700	40,700 MSY natural area adult spawners
Federally recognized tribal harvest	50.0%	50.0%	50.0%	50.0% Equals 43.7, 43.6, and 43.8 (thousand) adult fish for Yurok and Hoopa Valley tribal fisheries.
Spawner Reduction Rate	58.9%	58.9%	58.9%	≤ 58.9% FMP
Adult river mouth return	119.4	119.6	119.2	NA Total adults.
Age 4 ocean harvest rate	16.0%	16.0%	16.0%	≤ 16.0% NMFS ESA consultation standard for threatened California Coastal Chinook.
KMZ sport fishery share	10.3%	10.0%	8.9%	
River recreational fishery share	31.1%	31.9%	30.5%	NA Equals 13.6, 13.9, and 13.4 (thousand) adult fish for recreational inriver fisheries.
Sacramento River Winter (endangered)	17.9%	18.0%	14.8%	≤ 19% Age-3 ocean impact rate in fisheries south of Pt. Arena. In addition, the following season restrictions apply: Recreational- Pt. Arena to Pigeon Pt. between the first Saturday in April and the second Sunday in November; Pigeon Pt. to the U.S./Mexico Border between the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. Commercial- Pt. Arena to the U.S./Mexico border between May 1 and September 30, except Pt. Reyes to Pt. San Pedro between October 1 and 15 (Monday-Friday). Minimum size limit ≥ 26 inches total length (NMFS 2015 ESA Guidance).

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2015 ocean fishery Alternatives adopted by the Council.[a/] (Page 2 of 3)

Key Stock/Criteria	Projected Ocean Escapement[b/] or Other Criteria (Council Area Impacts in Parens) Alternative I	Alternative II	Alternative III		Spawner Objective or Other Comparative Standard as Noted
Sacramento River Fall	342.8	335.8	327.8	≥ 195.6	2015 preseason ACL.
Sacramento Index exploitation rate	47.4%	48.5%	49.7%	≤ 70.0%	FMP.
Ocean commercial impacts	167.8	176.6	187.1		All Alternatives include fall (Sept-Dec) 2014 impacts (17.9 thousand SRFC).
Ocean recreational impacts	85.6	84.8	83.7		All Alternatives include fall 2014 impacts (7.8 thousand SRFC).
River recreational impacts	55.8	54.7	53.4		No guidance in 2015.
Hatchery spawner goal	Met	Met	Met	22.0	Aggregate number of adults to achieve egg take goals at Coleman, Feather River, and Nimbus hatcheries.
COHO					
Interior Fraser (Thompson River)	9.5% (4.7%)	8.8% (4.0%)	7.9% (3.1%)	≤ 10.0%	2015 Southern U.S. exploitation rate ceiling; PSC coho agreement.
Skagit	38.4% (4.5%)	37.9% (3.8%)	37.3% (3.0%)	≤ 60.0%	2015 total exploitation rate ceiling; FMP matrix[d/e/]
Stillaguamish	32.8% (3.1%)	32.4% (2.7%)	31.9% (2.1%)	≤ 50.0%	2015 total exploitation rate ceiling; FMP matrix[d/e/]
Snohomish	31.5% (3.1%)	31.1% (2.7%)	30.6% (2.1%)	≤ 60.0%	2015 total exploitation rate ceiling; FMP matrix[d/e/]
Hood Canal	53.9% (4.9%)	53.5% (4.2%)	53.0% (3.3%)	≤ 65.0%	2015 total exploitation rate ceiling; FMP matrix[d/e/]
Strait of Juan de Fuca	12.3% (3.8%)	11.9% (3.4%)	11.1% (2.6%)	≤ 20.0%	2015 total exploitation rate ceiling; FMP matrix[d/e/]
Quillayute Fall	9.8	9.9	10.0	6.3	FMP MSY adult spawner estimate.[d/] Value depicted is ocean escapement.
Hoh	4.3	4.4	4.5	2.0	FMP MSY adult spawner estimate.[d/] Value depicted is ocean escapement.
Queets Natural	6.1	6.2	6.3	5.8	FMP MSY adult spawner estimate.[d/] Value depicted is ocean escapement.
Grays Harbor	127.3	128.2	129.8	24.4	FMP MSY adult spawner estimate.[d/] Value depicted is ocean escapement.
Willapa Bay Natural	37.7	38.1	38.9	17.2	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
Lower Columbia River Natural (threatened)	14.4%	13.4%	10.6%	≤ 23%	Total marine and mainstem Columbia R. fishery exploitation rate (2015 NMFS ESA guidance). Value depicted is ocean fishery exploitation rate only. Bolded values identify ocean exploitation rates that, when combined with 2014 freshwater harvest rates, will exceed the total allowable exploitation rate.
Upper Columbia[f/]	>50%	>50%	>50%	≥ 50%	Minimum percentage of the run to Bonneville Dam.
Columbia River Hatchery Early	301.5	315.3	333.0	41.2	Minimum ocean escapement to attain hatchery egg-take goal of 21.8 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Hatchery Late	145.6	155.5	168.3	8.8	Minimum ocean escapement to attain hatchery egg-take goal of 6.3 late adult coho, with average conversion and no mainstem or tributary fisheries.
Oregon Coastal Natural [b/g/]	13.4%	11.4%	8.8%	≤ 15.0%	Marine and freshwater fishery exploitation rate (NMFS ESA consultation standard). Value depicted is ocean fishery exploitation rate only. When combined with anticipated freshwater impacts, exploitation rates will meet, but not exceed, NMFS guidance.
Southern Oregon/Northern California Coast (threatened)	6.7%	6.8%	6.0%	≤ 13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2015 ocean fishery Alternatives analyzed by the STT.[a/] (Page 3 of 3)

a/ Projections in the table assume a WCVI mortality for coho of the 2014 preseason fishing effort scalars. Chinook fisheries in Southeast Alaska, North Coast BC, and WCVI troll and outside sport fisheries were assumed to have the same fishing effort scalars as expected preseason in 2014, as modified by the 2008 PST agreement. Assumptions for these Chinook fisheries will be changed prior to the April meeting when allowable catch levels for 2015 under the PST are known.

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 LCN coho include all marine impacts prior to the Buoy 10 fishery. Exploitation rates for OCN coho represent marine impacts. Values reported for Klamath River fall Chinook are natural area adult spawners. Values reported for Sacramento River fall Chinook are hatchery and natural area adult spawners.

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/ The co-managers will work throughout the North of Falcon/Pacific Fishery Management Council process to explore additional harvest opportunity for pink salmon, Chinook salmon, and other species as the current Chinook conservation constraints allow.

f/ Includes projected impacts of inriver fisheries that have not yet been shaped.

g/ Alternative I modeled as if 11,000 of the marked coho quota was rolled into the 10,000 non-mark-selective coho quota in September. The resulting 21,000 non-mark-selective coho quota in September in this simulation did not result in an increase to the projected impacts for LCN coho, but impacts for OCN coho increased by 2.2 percent for a marine exploitation rate of 13.4 percent.

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2015 ocean salmon fishery management Alternatives adopted by the Council. (Page 1 of 2)

Area and Fishery	2015 Catch Projection			2015 Bycatch Mortality[a/] Projection			2015 Bycatch Projection[b/]			Observed in 2014	
	I	II	III	I	II	III	I	II	III	Catch	Bycatch Mortality
OCEAN FISHERIES[c/]:	**CHINOOK (thousands of fish)**										
NORTH OF CAPE FALCON											
Treaty Indian Ocean Troll	66.3	54.0	40.0	15.6	12.7	9.4	51.7	42.1	31.1	61.5	47.8
Non-Indian Commercial Troll	67.0	59.0	53.0	34.5	31.2	27.9	125.7	113.9	101.8	54.9	25.5
Recreational	64.0	62.0	58.0	16.4	15.9	15.0	97.5	94.6	89.0	42.3	10.5
CAPE FALCON TO HUMBUG MT.											
Commercial Troll	87.1	82.9	81.3	12.8	12.2	12.0	33.0	31.4	30.8	175.6	22.6
Recreational	7.9	7.4	7.2	0.9	0.8	0.8	2.9	2.8	2.7	9.3	0.9
HUMBUG MT. TO HORSE MT.											
Commercial Troll	15.2	7.5	3.7	2.2	1.1	0.5	5.7	2.8	1.4	16.7	3.2 [d/]
Recreational	22.7	21.7	19.8	2.5	2.4	2.1	8.4	8.1	7.4	22.6	2.8 [d/]
SOUTH OF HORSE MT.											
Commercial	145.9	159.2	162.0	21.5	23.4	23.8	55.3	60.3	61.4	165.9	24.4 [d/]
Recreational	82.9	82.9	77.9	9.0	9.0	8.4	26.1	26.1	24.5	58.9	6.1 [d/]
TOTAL OCEAN FISHERIES											
Commercial Troll	381.4	362.6	340.0	86.7	80.7	73.7	271.3	250.5	226.4	474.6	123.5
Recreational	177.5	174.0	162.9	28.7	28.0	26.3	134.9	131.5	123.6	133.1	20.4
INSIDE FISHERIES:											
Area 4B	-	-	-	-	-	-	-	-	-	-	-
Buoy 10	NA	NA	NA	NA	NA	NA	NA	NA	NA	26.8	4.4 [d/]

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2015 ocean salmon fishery management Alternatives adopted by the Council. (Page 2 of 2)

Area and Fishery	2015 Catch Projection			2015 Bycatch Mortality[a/] Projection			2015 Bycatch Projection[b/]			Observed in 2014	
	I	II	III	I	II	III	I	II	III	Catch	Bycatch Mortality
COHO (thousands of fish)											
NORTH OF CAPE FALCON											
Treaty Indian Ocean Troll[e/]	50.0	40.0	30.0	4.0	3.3	2.4	8.4	6.8	5.1	55.7	4.2
Non-Indian Commercial Troll[e/]	20.8	25.6	22.4	14.2	15.6	12.9	48.8	52.9	44.1	23.1	9.9
Recreational[e/]	159.2	134.4	117.6	34.6	29.4	25.4	156.6	133.2	115.0	139.8	20.4
SOUTH OF CAPE FALCON											
Commercial Troll	-	-	-	12.9	12.8	12.5	49.6	49.1	47.9	3.3	9.8
Recreational[e/]	70.0	67.5	48.0	23.2	20.6	17.3	111.6	98.2	84.8	82.8	22.4
TOTAL OCEAN FISHERIES											
Commercial Troll	70.8	65.6	52.4	31.1	31.7	27.8	106.8	108.8	97.1	82.1	23.9
Recreational	229.2	201.9	165.6	57.8	50.0	42.7	268.2	231.4	199.8	222.6	42.8
INSIDE FISHERIES:											
Area 4B	-	-	-	-	-	-	-	-	-	-	-
Buoy 10	63.1	66.3	70.7	13.9	14.1	14.5	55.6	55.7	56.9	57.7	10.3 [d/]

a/ The bycatch mortality reported in this table consists of drop-off mortality (includes predation on hooked fish) plus hook-and-release mortality of Chinook and coho salmon in Council-area fisheries. Drop-off mortality for both Chinook and coho is assumed to be equal to 5% of total encounters. The hook-and-release mortality (HRM) rates used for both Chinook and coho are:

Commercial: 26%.

Recreational, north of Pt. Arena: 14%.

Recreational, south of Pt. Arena: 19% (based on the expected proportion of fish that will be caught using mooching versus trolling gear, and the HRMs of 42.2% and 14% for these two respective gear types).

b/ Bycatch calculated as dropoff mortality plus fish released.

c/ Includes Oregon territorial water, late season Chinook fisheries.

d/ Based on reported released Chinook or coho.

e/ Includes fisheries that allow retention of all legal sized coho.

TABLE 7. Expected coastwide lower Columbia Natural (LCN), Oregon coastal natural (OCN), and Rogue/Klamath (RK) coho, and Lower Columbia River (LCR) natural tule Chinook exploitation rates by fishery for 2015 ocean fisheries management Alternatives adopted by the Council.

	Exploitation Rate (Percent)											
	LCN Coho			OCN Coho [a/]			RK Coho			LCR Tule Chinook		
Fishery	I	II	III	I	II	III	I	II	III	I	II	III
SOUTHEAST ALASKA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	1.7%	1.7%
BRITISH COLUMBIA	0.1%	0.1%	0.1%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	13.0%	13.1%	13.2%
PUGET SOUND/STRAIT	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.4%	0.4%	0.4%
NORTH OF CAPE FALCON												
Treaty Indian Ocean Troll	2.1%	1.7%	1.2%	0.5%	0.4%	0.3%	0.0%	0.0%	0.0%	5.6%	4.6%	3.5%
Recreational	6.2%	5.1%	4.4%	1.1%	0.9%	0.8%	0.1%	0.0%	0.0%	3.6%	3.5%	3.2%
Non-Indian Troll	1.6%	1.9%	1.5%	0.4%	0.4%	0.4%	0.0%	0.0%	0.0%	7.8%	6.9%	6.2%
SOUTH OF CAPE FALCON												
Recreational:										0.1%	0.1%	0.1%
Cape Falcon to Humbug Mt.	3.0%	3.0%	2.1%	5.6%	6.0%	3.9%	0.4%	0.3%	0.2%			
Humbug Mt. to OR/CA border (KMZ)	0.1%	0.1%	0.0%	0.2%	0.3%	0.2%	0.5%	0.6%	0.5%			
OR/CA border to Horse Mt. (KMZ)	0.1%	0.1%	0.1%	0.4%	0.4%	0.3%	1.7%	1.7%	1.6%			
Fort Bragg	0.0%	0.0%	0.0%	0.3%	0.3%	0.3%	0.9%	0.9%	0.8%			
South of Pt. Arena	0.0%	0.0%	0.0%	0.3%	0.3%	0.3%	0.7%	0.7%	0.7%			
Troll:										1.5%	1.5%	1.5%
Cape Falcon to Humbug Mt.	0.8%	0.8%	0.8%	0.9%	0.9%	0.9%	0.1%	0.1%	0.1%			
Humbug Mt. to OR/CA border (KMZ)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
OR/CA border to Horse Mt. (KMZ)	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.4%	0.2%	0.0%			
Fort Bragg	0.0%	0.1%	0.0%	0.5%	0.6%	0.6%	1.2%	1.5%	1.3%			
South of Pt. Arena	0.0%	0.0%	0.0%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%			
BUOY 10	3.3%	3.3%	3.4%	0.2%	0.2%	0.2%	0.0%	0.0%	0.0%	7.9%	8.1%	8.3%
ESTUARY/FRESHWATER	N/A	N/A	N/A	N/A	N/A	N/A	0.2%	0.2%	0.2%			
TOTAL	14.4%	13.4%	10.6%	13.4% [b/]	11.4%	8.8%	6.7%	6.8%	6.0%	**41.5%**	39.9%	38.2%

a/ Exploitation rates for OCN coho represent marine impacts. When combined with anticipated freshwater impacts, exploitation rates will meet, but not exceed, NMFS guidance.

b/ Modeled as if 11,000 of the marked coho quota was rolled into the 10,000 non-mark-selective coho quota in September. The resulting 21,000 non-mark-selective coho quota in September in this simulation did not result in an increase to the projected impacts for LCN coho, but impacts for OCN coho increased by 2.2 percent for a marine exploitation rate of 13.4 percent.

TABLE 8. Projected coho mark rates for 2015 fisheries under base period fishing patterns (percent marked).

Area	Fishery	June	July	August	Sept
Canada					
Johnstone Strait	Recreational	-	25%	22%	-
West Coast Vancouver Island	Recreational	42%	33%	42%	44%
North Georgia Strait	Recreational	42%	43%	42%	37%
South Georgia Strait	Recreational	33%	47%	38%	41%
Juan de Fuca Strait	Recreational	43%	45%	46%	42%
Johnstone Strait	Troll	50%	41%	23%	37%
NW Vancouver Island	Troll	43%	36%	34%	28%
SW Vancouver Island	Troll	48%	45%	45%	46%
Georgia Strait	Troll	50%	50%	52%	46%
Puget Sound					
Strait of Juan de Fuca (Area 5)	Recreational	54%	49%	47%	47%
Strait of Juan de Fuca (Area 6)	Recreational	51%	46%	47%	44%
San Juan Island (Area 7)	Recreational	39%	46%	43%	31%
North Puget Sound (Areas 6 & 7A)	Net	-	51%	43%	37%
Council Area					
Neah Bay (Area 4/4B)	Recreational	36%	51%	49%	54%
LaPush (Area 3)	Recreational	57%	55%	56%	39%
Westport (Area 2)	Recreational	63%	62%	59%	51%
Columbia River (Area 1)	Recreational	71%	70%	65%	67%
Tillamook	Recreational	62%	58%	53%	40%
Newport	Recreational	58%	54%	52%	39%
Coos Bay	Recreational	50%	47%	37%	23%
Brookings	Recreational	44%	33%	28%	11%
Neah Bay (Area 4/4B)	Troll	47%	48%	48%	47%
LaPush (Area 3)	Troll	51%	55%	49%	48%
Westport (Area 2)	Troll	46%	54%	57%	52%
Columbia River (Area 1)	Troll	65%	65%	62%	60%
Tillamook	Troll	59%	56%	56%	53%
Newport	Troll	56%	55%	51%	50%
Coos Bay	Troll	50%	47%	42%	29%
Brookings	Troll	39%	39%	42%	56%
Columbia River					
Buoy 10	Recreational	-	-	-	66%

TABLE 9. Preliminary projected exvessel value under Council-adopted 2015 non-Indian commercial troll regulatory Alternatives compared to 2014 and the 2010-2014 average (in inflation adjusted dollars).

		Exvessel Value (thousands of dollars)[a/]				
Management Area	Alternative	2015 Projected[b/]	2014 Actual	Percent Change from 2014	2010-2014 Average[c/]	Percent Change From 2010-2014 Average
North of Cape Falcon	I	5,273	4,077	+29%	3,261	+62%
	II	4,743		+16%		+45%
	III	4,252		+4%		+30%
Cape Falcon to Humbug Mt	I	6,325	12,095	-48%	5,412	+17%
	II	6,020		-50%		+11%
	III	5,907		-51%		+9%
Humbug Mt. to Horse Mt.	I	1,091	1,269	-14%	672	+62%
	II	537		-58%		-20%
	III	263		-79%		-61%
Horse Mt. to Pt. Arena	I	3,560	5,422	-34%	4,060	-12%
	II	3,771		-30%		-7%
	III	3,776		-30%		-7%
South of Pt. Arena	I	8,637	6,956	+24%	7,102	+22%
	II	9,550		+37%		+34%
	III	9,781		+41%		+38%
Total South of Cape Falcon	I	19,613	25,741	-24%	17,245	+14%
	II	19,877		-23%		+15%
	III	19,726		-23%		+14%
West Coast Total	I	24,886	29,818	-17%	20,506	+21%
	II	24,620		-17%		+20%
	III	23,979		-20%		+17%

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, 2014 exvessel prices and 2014 average weight per fish.
c/ Values are inflation-adjusted to 2014 dollars.

TABLE 10. Preliminary projected angler trips and coastal community income impacts generated under Council-adopted 2015 recreational ocean salmon fishery regulatory Alternatives compared to 2014 and the 2010-2014 average (in inflation adjusted dollars).

		Angler Trips (thousands)			Community Income Impacts (thousands of dollars)[a/]			Percent Change in Income Impacts	
Management Area	Alternative	Estimates Based on the Alternatives	2014 Actual	2010-2014 Avg.	Estimates Based on the Alternatives	2014 Actual	2010-2014 Avg.	Compared to 2014 Actual	Compared to 2010-2014 Avg.
North of Cape Falcon	I	168.8	125.0	91.6	33,547	24,838	18,551	+35%	+81%
	II	145.3			28,889			+16%	+56%
	III	129.5			25,733			+4%	+39%
Cape Falcon to Humbug Mt.	I	62.7	92.2	53.5	6,548	9,623	5,411	-32%	+21%
	II	57.8			6,036			-37%	+12%
	III	55.5			5,790			-40%	+7%
Humbug Mt. to Horse Mt.	I	42.9	37.7	33.8	5,731	5,040	4,545	+14%	+26%
	II	41.2			5,505			+9%	+21%
	III	38.4			5,138			+2%	+13%
Horse Mt. to Pt. Arena	I	20.7	17.5	14.1	4,136	3,485	2,796	+19%	+48%
	II	20.7			4,136			+19%	+48%
	III	19.9			3,977			+14%	+42%
South of Pt. Arena	I	107.0	82.2	76.9	24,551	18,841	16,936	+30%	+45%
	II	107.0			24,551			+30%	+45%
	III	98.1			22,505			+19%	+33%
Total South of Cape Falcon	I	233.4	229.5	178.3	40,965	36,989	29,687	+11%	+38%
	II	226.8			40,228			+9%	+36%
	III	212.0			37,410			+1%	+26%
West Coast Total	I	402.1	354.5	269.8	74,512	61,827	48,237	+21%	+54%
	II	372.1			69,116			+12%	+43%
	III	341.4			63,143			+2%	+31%

a/ Income impacts are not comparable to the exvessel values shown in Table 9. All dollar values are inflation-adjusted to 2014 dollars.

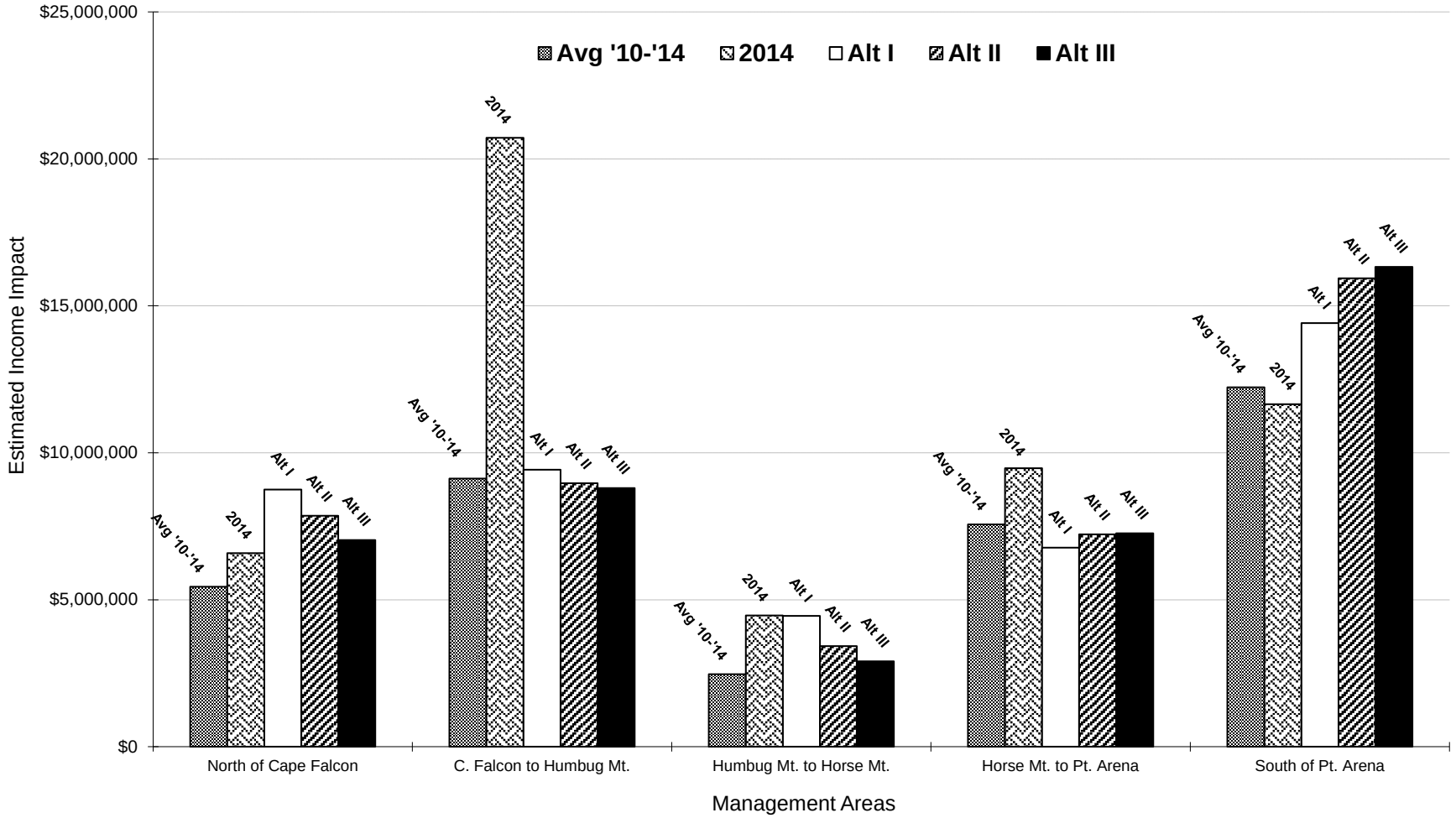

FIGURE 1. Projected community income impacts associated with landings projected under the Council adopted 2015 commercial fishery Alternatives compared to 2014 and the 2010-2014 average (in inflation-adjusted dollars).

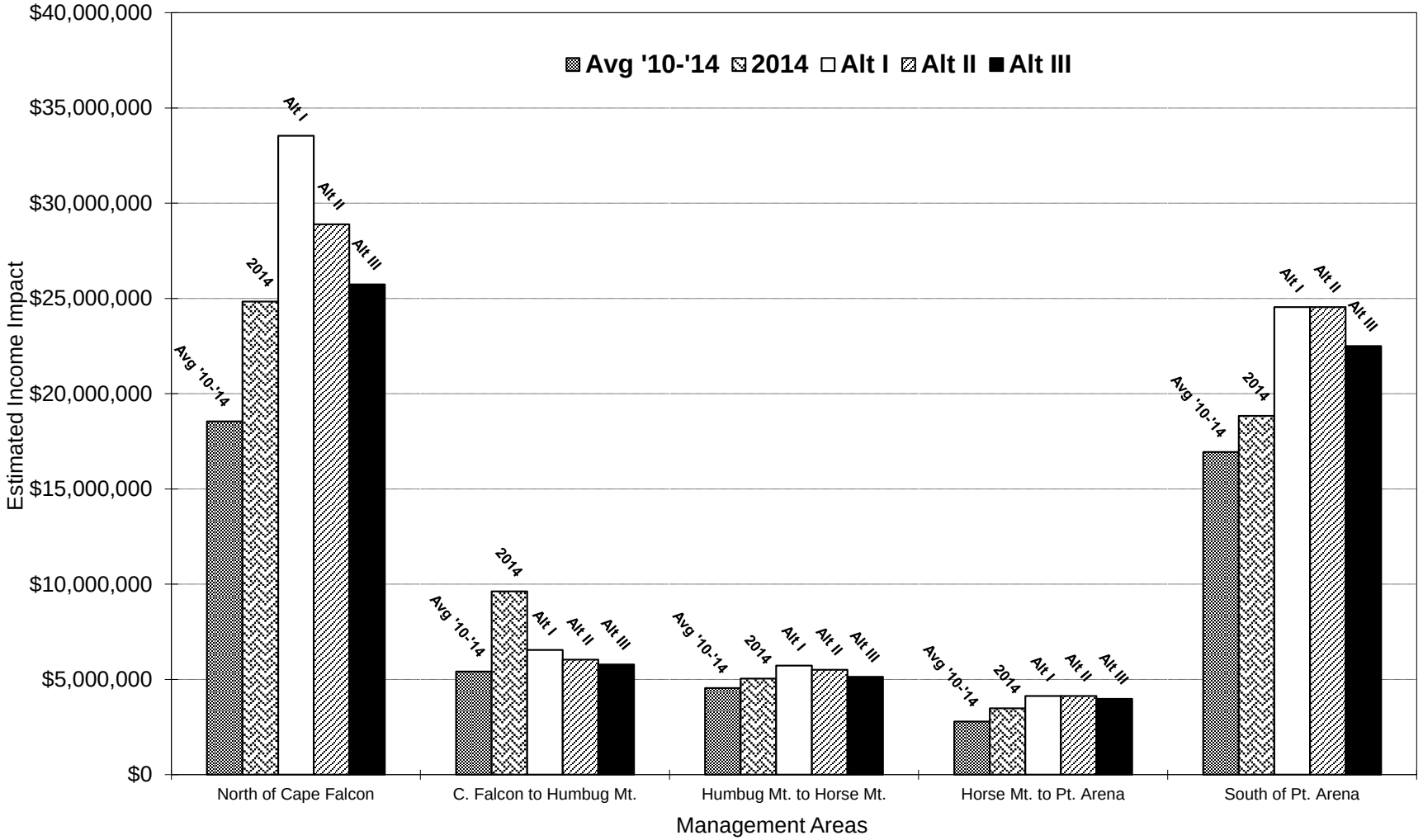

FIGURE 2. Projected community income impacts associated with angler effort projected under the Council adopted 2015 recreational fishery Alternatives compared to 2014 and the 2010-2014 average (in inflation-adjusted dollars).

APPENDIX A: PROJECTED IMPACT RATES AND HARVEST FOR AGE-3 SACRAMENTO RIVER WINTER CHINOOK AND AGE-4 KLAMATH RIVER FALL CHINOOK

Table A-1. Sacramento River winter run Chinook age-3 ocean impact rate south of Pt. Arena by fishery and Alternative. The age-3 SRWC impact rate was projected for each of the proposed 2015 fishing season Alternatives. The impacts are displayed as a percent for each Alternative by fishery, port area, and month. Max rate: 19.0.

Commercial

Alternative I **17.9 Total**

Port Area	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
SF	0.18	0.39	0.40	0.18	0.01	0.08			1.23
MO	0.39	0.46	0.47	0.77	0.13				2.22
Total	0.57	0.84	0.87	0.95	0.14	0.08			**3.45**

Alternative II **18.0 Total**

Port Area	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
SF	0.17	0.63	0.40	0.24	0.01	0.08			1.52
MO	0.36	0.78	0.53	0.78	0.13				2.58
Total	0.53	1.41	0.93	1.02	0.14	0.08			**4.10**

Alternative III **14.8 Total**

Port Area	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
SF	0.18	0.79	0.44	0.19					1.60
MO	0.39	1.18	0.52	0.79					2.89
Total	0.57	1.97	0.96	0.98					**4.48**

Recreational

Alternative I

Port Area	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
SF	0.15	0.97	1.33	1.92	0.57	0.05	0.24	0.03		5.27
MO	0.98	1.08	2.21	3.64	1.20	0.09	0.00			9.19
Total	1.13	2.05	3.54	5.56	1.77	0.14	0.24	0.03		**14.47**

Alternative II

Port Area	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
SF	0.15	0.97	1.34	1.92	0.57	0.05	0.24	0.03		5.28
MO	0.98	0.52	2.23	3.64	1.20	0.09	0.00			8.64
Total	1.13	1.49	3.57	5.56	1.77	0.14	0.24	0.03		**13.92**

Alternative III

Port Area	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
SF	0.15	0.42	0.82	1.50	0.52	0.01				3.43
MO	0.98	0.52	1.39	2.92	1.10	0.02				6.92
Total	1.13	0.94	2.21	4.42	1.62	0.03				**10.35**

SF = Pt. Arena to Pigeon Pt. (San Francisco)
MO = Pigeon Pt. to the U.S./Mexico Border (Monterey)

Table A-2. Klamath River fall Chinook age-4 ocean harvest by fishery and Alternative. In 2015, a harvest of 11,378 age-4 KRFC results in a 16% ocean harvest rate.

Commercial

Alternative I 16.0% Total

Port	Fall 2014		Summer 2015						Summer	Year
Area	Sept	Oct-Dec	Mar	Apr	May	Jun	Jul	Aug	Total	Total
NO	17			111	206	72	66	213	668	685
CO	80			296	339	246	373	737	1,991	2,071
KO					55	212	91	45	403	403
KC					847	145	46	54	1,092	1,092
FB						1,276	2,314	618	4,208	4,208
SF					376	386	756	75	1,593	1,593
MO					89	35	70	1	195	195
Total	97			407	1,913	2,372	3,717	1,743	10,152	10,249
										14.4%

Alternative II 16.0% Total

Port	Fall 2014		Summer 2015						Summer	Year
Area	Sep	Oct-Dec	Mar	Apr	May	Jun	Jul	Aug	Total	Total
NO	17			111	206	73	66	211	667	684
CO	80			296	339	249	373	732	1,989	2,069
KO					55	170	73	44	342	342
KC										
FB					246	1,894	2,610	360	5,110	5,110
SF					360	626	755	99	1,840	1,840
MO					80	60	79	1	220	220
Total	97			407	1,288	3,072	3,956	1,448	10,171	10,268
										14.4%

Alternative III 16.0% Total

Port	Fall 2014		Summer 2015						Summer	Year
Area	Sep	Oct-Dec	Mar	Apr	May	Jun	Jul	Aug	Total	Total
NO	17			111	206	73	66	238	694	711
CO	80			296	339	251	376	823	2,085	2,165
KO					55	128	46	45	274	274
KC										
FB						1,643	2,529	620	4,792	4,792
SF					376	790	827	76	2,069	2,069
MO					89	90	77	1	257	257
Total	97			407	1,066	2,975	3,920	1,802	10,170	10,267
										14.4%

Recreational

Alternative I

Port	Fall 2014			Summer 2015						Summer	Year
Area	Sep	Oct	Nov-Dec	Mar	Apr	May	Jun	Jul	Aug	Total	Total
NO								8	4	12	12
CO	29					2	7	20	12	41	70
KO						2	20	49	152	223	223
KC						100	126	115	198	539	539
FB					2	20	46	61	14	143	143
SF					22	14	49	47	2	134	134
MO					17	3	5	11	1	37	37
Total	29				42	140	253	310	383	1,128	1,157
											1.6%

Alternative II

Port	Fall 2014			Summer 2015						Summer	Year
Area	Sep	Oct	Nov-Dec	Mar	Apr	May	Jun	Jul	Aug	Total	Total
NO								8	2	10	10
CO	29					2	7	20	11	40	69
KO						2	20	49	151	222	222
KC						74	127	115	197	513	513
FB					2	20	47	61	14	144	144
SF					22	14	50	47	2	135	135
MO					17	3	5	11	1	37	37
Total	29				42	114	256	310	377	1,099	1,128
											1.6%

Alternative III

Port	Fall 2014			Summer 2015						Summer	Year
Area	Sep	Oct	Nov-Dec	Mar	Apr	May	Jun	Jul	Aug	Total	Total
NO								8	2	10	10
CO	29					2	4	20	11	37	66
KO						1	20	49	152	222	222
KC						32	128	116	198	474	474
FB					2	20	47	61	14	144	144
SF					22	14	50	47	2	135	135
MO					17	3	5	11	1	37	37
Total	29				42	71	255	312	380	1,060	1,089
											1.5%

APPENDIX B: NEPA AND ESA ANALYSES INCORPORATED BY REFERENCE

Several documents supporting the analyses of effects to the environment from the Alternatives have been incorporated by reference. Those documents are described and passages relevant to analyses contained in this EA are excerpted below.

NMFS 2003: West Coast Salmon Harvest Programmatic EIS

This document evaluates how NMFS reviews annual salmon fishery plans in three jurisdictions, the North Pacific Fishery Management Council for Southeast Alaska; the Pacific Fishery Management Council for the Washington, Oregon, and California coast; and *U.S. v. Oregon* for the Columbia River Basin. In general, NMFS seeks to implement fisheries that are consistent with a variety of statutory and legal obligations related to resource conservation, socioeconomic benefits associated with resource use, and treaty trust obligations. Fishery plans are developed annually within the context of framework plans to meet the year-specific circumstances related to the status of stocks affected by the fisheries. This final PEIS evaluates different ways to balance these objectives and different strategies that can be used that may provide better solutions for meeting the obligations and objectives of the respective framework plans. The Alternatives considered in this final PEIS are programmatic in nature and are designed to provide an overview of fishery management methods and strategies that can be implemented as part of the annual planning processes.

This document includes the following statements relative to Council area salmon fisheries:

> *While the levels of salmon catch fluctuate from year to year, the amount of groundfish taken as incidental catch is very low so that changes in the salmon fishery do not substantially alter the projections for harvest-related mortality in the groundfish fishery.*
>
> *Other Council managed species such as halibut, highly migratory species (draft FMP), 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 show the co-occurrence 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 the non-salmon stocks*
>
> *The commercial troll fishery off the coasts of Washington, Oregon, and California is classified as a Category III fishery, indicating a remote or no likelihood of known incidental mortality or serious injury of marine mammals. In general, recreational fishery uses the same gear and techniques as the commercial fisheries and can be assumed to have similar rates of encounters and results.*
>
> *After excluding ESA listed marine mammals, only three species of marine mammals are defined as strategic under MMPA within the coverage area: short-finned pilot whales, mesoplodont beaked whales, and Minke whales (Barlow et al. 1997). This strategic classification denotes that projected human-caused mortality exceeds the species' annual potential biological removal estimate under MMPA standards. As with ESA listed marine mammal species, there is no record of these three species being affected by the ocean salmon fisheries managed by the Council.*
>
> *Steller sea lion interaction with the Pacific Coast salmon fisheries is rare and NMFS has determined mortality and serious injury incidental to commercial fishing operations would have a negligible effect.* [1]*Available information indicates that Pacific Coast salmon fisheries are not likely*

[1] The eastern DPS of Steller sea lions was delisted under the ESA on November 4, 2013 (78 *FR* 66140).

to jeopardize the existence of the Guadalupe fur seal. No sea turtles have been reported taken by the ocean salmon fisheries off Washington, Oregon, or California. NMFS has determined that commercial fishing by Pacific Coast fisheries would pose a negligible threat to the Pacific species.

Short-term effects on seabirds are minimal, if any. The types of vessels used in the fishery and the conduct of the vessels are not conducive to collisions or the introduction of rats other non-indigenous species to seabird breeding colonies. Anecdotal information suggests accidental bird encounters are a rare event for commercial and recreational ocean salmon fisheries (Council 1999a). Long-term effects on seabirds from the ocean salmon fisheries are also minimal.

The removal of adult salmon by the ocean fisheries is not considered to significantly affect the lower trophic levels or the overall marine ecosystem because salmon are not the only or primary predator in the marine environment.

PFMC 2006: EA for 2006 Ocean Salmon Management Measures

The 2006 regulations EA analyzes the environmental and socioeconomic impacts of proposed management measures for ocean salmon fisheries occurring off the coasts of Washington, Oregon, and California. The document evaluated the 2006 annual salmon ocean harvest management measures with respect to compliance with the terms of the Salmon FMP, obligations under the Pacific Salmon Treaty (PST), and the level of protection required by all consultation standards for salmon species listed under the ESA. The range of alternatives analyzed in the 2006 Regulations EA included the effects of three levels of *de minimis* fishing strategies on KRFC when the stock was projected to fall below the 35,000 natural spawner floor for the third consecutive year. The escapement floor for naturally spawning KRFC was projected to not be attained even with complete closure of ocean salmon fisheries between Cape Falcon, Oregon, and Point Sur, California; therefore, the management measures required implementation by emergency rule. The NMFS-recommended 2006 salmon fishery management measures did not completely close fisheries between Cape Falcon and Point Sur, but limited fisheries to provide a minimum of 21,100 natural spawning adult KRFC in 2006. The 2006 EA supported NMFS' Finding of No Significant Impacts (FONSI) for the 2006 ocean salmon regulations.

Appendix A of Amendment 14 (EFH Appendix A) describes salmon EFH and fishing and non-fishing impacts to this habitat. It found no evidence of direct gear effects on this habitat from Council-managed salmon fisheries. ... Because EFH impacts are extensively described and analyzed in EFH Appendix A, and this analysis demonstrates the fishery has no significant impacts, EFH will not be considered further in this environmental assessment.

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 measures if unsafe weather affected fishery access. 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.

NMFS 2008: Biological Opinion on 2008 Ocean Fisheries Effects on Southern Resident Killer Whales

This document constitutes the National Marine Fisheries Service's (NMFS) biological opinion regarding the effects of the 2008-2009 Pacific coast salmon fisheries on the Southern Resident killer whale distinct population segment. The fisheries assessed by this Opinion are fisheries are managed under the jurisdiction

of the Pacific Fisheries Management Council (PFMC) and target primarily Chinook and coho salmon, and pink salmon.

After reviewing the current status of the endangered population of Southern Resident killer whales and their critical habitat, the environmental baseline for the action area, the effects of the proposed actions, and cumulative effects, it is NMFS's biological opinion that the proposed action is not likely to jeopardize the continued existence of the Southern Resident killer whales or adversely modify critical habitat.

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Marine Fisheries Management Zones