

**PRESEASON REPORT III**  
**COUNCIL ADOPTED MANAGEMENT MEASURES**  
**AND**  
**ENVIRONMENTAL ASSESSMENT PART 3**  
**FOR 2017**  
**OCEAN SALMON FISHERY**  
**REGULATIONS**

REGULATION IDENTIFIER NUMBER 0648-BG59



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## LIST OF ACRONYMS AND ABBREVIATIONS

AABM	Aggregate Abundance Based Management
AEQ	adult equivalent
BO	biological opinion
CDFW	California Department of Fish and Wildlife
Council	Pacific Fishery Management Council
CPUE	catch per unit effort
EEZ	Economic Exclusive Zone
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FMP	fishery management plan
FONSI	finding of no significant impact
FRAM	Fishery Regulation Assessment Model
GSI	genetic stock identification
IPHC	International Pacific Halibut Commission
ISBM	Individual Stock Based Management
KMZ	Klamath Management Zone
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 river wild (Columbia River fall Chinook, primarily from the North Lewis River)
MSY	maximum sustainable yield
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
ODFW	Oregon Department of Fish and Wildlife
OCN	Oregon coastal natural (coho)
OPI	Oregon Production Index
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RER	rebuilding exploitation rate
RMP	Resource Management Plan
RK	Rogue/Klamath (hatchery coho)
SAS	Salmon Advisory Subpanel
SCH	Spring Creek Hatchery (tule fall Chinook returning to Spring Creek Hatchery)
SI	Sacramento index
SONCC	Southern Oregon/Northern California Coast (coho)
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
SWO	State Waters Only (fisheries off Oregon south of Cape Falcon)
WCVI	West Coast Vancouver Island
WDFW	Washington Department of Fish and Wildlife

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## 1.0 INTRODUCTION

This is the last in a series of three preseason reports prepared by the Pacific Fishery Management Council's (Council) Salmon Technical Team (STT) and staff. The reports document and help guide salmon fishery management in the exclusive economic zone (EEZ) from 3 to 200 nautical miles off the coasts of Washington, Oregon, and California, and within state territorial waters. This report summarizes the STT analysis of the 2017 ocean salmon fishery management measures adopted by the Council for submission to the U.S. Secretary of Commerce and characterizes their expected impacts on ocean salmon fisheries and the stocks which support them.

This report also constitutes the third and final part of an Environmental Assessment (EA) to comply with National Environmental Policy Act (NEPA) requirements for the 2017 ocean salmon regulations and includes a description and analysis of a Proposed Action. An EA is used to determine whether an action being considered by a Federal agency has significant environmental impacts. The second part of the EA (Preseason Report II; PFMC 2017c) presented a statement of the purpose and need, a description of the affected environment, a description of 2017 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 2017b) 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 this report, 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.

The Council's recommendations for the 2017 ocean salmon fishery regulations meet all objectives of the FMP (Section 3), including Annual Catch Limits (ACLs) set according to the FMP and described in Preseason Report I; the level of protection required by all consultation standards for salmon species listed under the Endangered Species Act (ESA) (Section 4), and; the obligations under the Pacific Salmon Treaty (PST) (Section 5) except as described below.

Under the Council's recommended salmon fisheries, salmon stocks originating from the Columbia River, Oregon, and California meet all of the applicable conservation objectives in the FMP. North of these areas, the conservation objective in the FMP for Queets River wild coho could not be met with 2017 ocean fishery alternatives when combined with in-river Treaty fisheries, although relatively healthy harvestable Columbia River and coastal coho stocks are available. To address this situation, the Council's recommendations depart from the letter of the FMP and thus require adoption by emergency rule. The Council recommends deviating from the coho allocation schedule between recreational and commercial fisheries north of Cape Falcon to allow a greater portion of the very limited coho harvest to be taken by the recreational fishery which is highly dependent on coho.

The projected spawning escapement for Queets River coho is below the FMP objective of 5,800 natural spawners. Under court orders for Washington coastal and Puget Sound stocks, the treaty tribes and WDFW may agree to annual spawner targets that differ from the FMP objective. In 2017, the tribal and WDFW co-managers agreed to an escapement objective of 5,130. This reduced escapement results in an expected exploitation rate of 22 percent.

The forecast abundance for Queets River wild coho places this stock in the 'low' category under the PST, which limits the exploitation rate to 20 percent. The Pacific Salmon Commission's Southern Panel concurred with an exception to this limit under Chapter 5, Paragraph 11(c) of the PST. The result is that the proposed action is in compliance with provisions of both the FMP and the PST.

## 2.0 SELECTION OF FINAL MANAGEMENT MEASURES

The following figures and tables describe the Council-adopted management measures covering the period from May 1, 2017, to April 30, 2018:

- Table 1 - Non-Indian commercial ocean salmon management measures;
- Figure 1 - Geographic outline of commercial troll (non-Indian) ocean salmon seasons;
- Table 2 - Recreational ocean salmon management measures;
- Figure 2 - Geographic outline of recreational ocean salmon seasons;
- Table 3 - Treaty Indian commercial ocean management measures; and
- Table 4 - Allowable catch quotas for Chinook and coho.

In addition, Tables 5, 6, and 7 provide information on the biological impacts and landing estimates for the Council's management recommendations. Table 8 displays the expected mark (healed adipose fin-clip) rate for coho encountered in Council adopted mark-selective fisheries. Tables 9 and 10, and Figures 3 and 4, provide information on the economic impacts of the proposed fisheries. Table 11 summarizes environmental effects of the Proposed Action and Alternatives.

The 2017 seasons are constrained primarily by: (1) Klamath River fall Chinook (KRFC) south of Cape Falcon, (2) endangered Sacramento River winter Chinook (SRWC) south of Point Arena, (3) Queets River coho north of the OR/CA border, and (4) Queets River coho, Puget Sound coho, and Puget Sound Chinook north of Cape Falcon.

Regulations and expected fishing patterns for the treaty Indian ocean fisheries were developed by the Hoh, S'Klallam, Makah, Quileute, and Quinault tribes for their respective fisheries.

### 2.1 *Inseason Management*

Inseason changes are made to meet the preseason intent of the management measures described in this document, but must also meet the Council's FMP goals, especially in regard to conservation and allocation goals, Federally-recognized Indian fishing rights, consultation standards for ESA-listed salmon stocks, and obligations under the PST.

Inseason actions that are anticipated for the 2017-2018 management season include, but are not limited to, the following possibilities:

1. Adjustments in landing limits and days open for non-Indian commercial fisheries.
2. Changing the days or number of days of fishing allowed per calendar week for recreational fisheries.
3. Transfer of coho quotas among recreational port areas north of Cape Falcon.
4. Trading portions of Chinook and coho quotas between recreational and non-Indian commercial sectors north of Cape Falcon.
5. Routine openings and closings, and other management measures associated with quota management, including modifying open areas, bag limits, species retention limits, and mark-selective retention restrictions.
6. Transferring unused or exceeded quota to subsequent fisheries on an impact neutral, fishery equivalent basis.
7. Closing Oregon recreational and commercial fisheries scheduled to open March 15, 2018 if necessary to meet 2018 management objectives.
8. Closing California recreational fisheries scheduled to open April 7, 2018, or commercial fisheries scheduled to open April 16, 2018, if necessary to meet 2018 management objectives.
9. Adjustments to incidental Pacific halibut catch regulations in commercial fisheries, including landing and possession ratios and landing and possession limits per trip.



Inseason action will generally be accomplished through NMFS sponsored conference calls attended by representatives of affected state and tribal management agencies, the Council, the Salmon Advisory Subpanel (SAS), and the STT. The Council may also make recommendations for inseason actions at any of its regularly scheduled meetings.

## 2.2 State Waters Fisheries

In addition to the seasons shown in Tables 1 and 2, the Oregon Department of Fish and Wildlife (ODFW) may permit fall fisheries for salmon in certain areas within state marine waters. Potential seasons off the Oregon coast include commercial and recreational fisheries at the mouths of the Chetco, Elk, and other rivers. Washington may also establish limited recreational salmon fisheries in state marine waters if additional impacts on critical coho and/or Chinook stocks can be accommodated within management constraints. California will not establish any additional state marine water salmon fisheries in 2017.

## 3.0 SALMON FISHERY MANAGEMENT PLAN REQUIREMENTS

The Council's 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 three west coast states and impacted by Council area ocean fisheries are listed in Table 3-1 of the 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. Impacts on these stocks relative to the applicable objectives are described in Table 5.

Administrative objectives are requirements for meeting other applicable law outside of the FMP. These requirements include ESA consultation standards, international treaties, and tribal trust responsibilities. The FMP defers to NMFS consultation standards for salmon stocks listed under the ESA in regards to biological conservation objectives. Section 4.0 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 FMP requires compliance with relevant terms of the PST. Section 5.0 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.

The FMP also requires compliance with treaty fishing rights as described in 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 inform the Council's adoption of final management measure recommendations while meeting its biological, administrative, and allocation objectives.

The Columbia River treaty tribes establish periodic management agreements with the state comanagers 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 KRFC harvest, which is calculated as a harvest of KRFC equal to that taken in all non-tribal 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. The 2017 salmon management measures adopted by the Council meet the allocation requirements for fisheries north of Cape Falcon in the Salmon FMP, except that that the proportion of the coho TAC (total allowable catch) allocated to the recreational fishery is higher than prescribed by the Salmon FMP and the allocation to the non-Indian commercial troll fishery is lower than prescribed. This departure from the allocation formula in the FMP is necessary to protect coastal and Puget Sound coho stocks projected to return in very low numbers while providing opportunity for recreational fisheries dependent on coho retention.

In support of the adoption of the 2017 salmon management measures, the Council reviewed the criteria used to evaluate requests for emergency action by the Secretary from Council Operating Procedure 10 (*italics below*) and provided the following preliminary rationale for considering a deviation from the FMP harvest allocation guidelines and escapement objectives:

1. *The issue was not anticipated or addressed in the salmon plan, or an error was made.*  
The issue does not appear to be caused by an error. Rather, the relatively healthy abundance of Chinook and the low abundance of especially Queets River wild coho presented circumstances that were not anticipated in the FMP to the extent encountered this year.  
Regarding the allocation of coho between the recreational and commercial fisheries: The recreational fishery is much more dependent on coho to achieve the FMP objectives than the non-Indian commercial troll fishery, which depends more heavily on Chinook harvest. Therefore, the Council considered and adopted an alternative that varies from the coho harvest allocation guidelines. The result is the preferred alternative that recognizes those differences and allocates a greater portion of the small number of harvestable coho to the recreational fishery while relying on the ability of the commercial fishery to access harvestable Chinook to achieve the management objectives in the FMP.
2. *Waiting for a plan amendment to be implemented would have substantial adverse biological or economic consequences.*  
In the event that regulations that include a deviation in coho allocation from the FMP were not able to move forward, there would be significant economic consequences to the ports and communities of the Columbia River, Westport, La Push and Neah Bay. The Alternatives should optimize the harvest of harvestable stocks while meeting conservation objectives to the best of our ability. A plan amendment could not be completed in time given that fisheries commence on May 1.
3. *In the case of allocation issues, the affected user representatives support the proposed emergency action.*  
The commercial troll and recreational fishery representatives involved in the North of Falcon process supported the Alternatives that went out for public review, including those that deviated from strict adherence to the FMP, as well as the Council's final preferred management measures.
4. *The action is necessary to meet FMP objectives.*  
The structure of the final management measures and the potential deviation from the strict terms of the FMP have the potential to better optimize harvest and conservation and thereby more fully meet

FMP objectives. The final management measures allow some fishing targeting relatively healthy stocks while minimizing impacts on stocks suffering from low abundance.

5. *If the action is taken, long-term yield from the stock complex will not be decreased.*

It is not anticipated that any aspect of the final management measures would decrease long-term yield. The potential deviation from the FMP allocation guidelines is intended to have the opposite effect by providing modest harvest opportunity where appropriate while minimizing impacts on stocks of concern. The final management measures have relatively low impacts on Queets River wild coho, impacting a few hundred fish in Council area fisheries. The comanagers considered past escapement levels and resulting performance for the affected stocks in developing fisheries with impacts at these levels, and concluded that these impacts would not affect the long-term yield from the stocks.

## 4.0 SPECIES LISTED UNDER THE ENDANGERED SPECIES ACT

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

ESU	Status	Federal Register Notice				
		Most Recent		Original Listing		
<b>Chinook</b>						
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	
Lower 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	
<b>Chum</b>						
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	
<b>Coho</b>						
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	
Lower Columbia River	Threatened	76 FR 50448	8/15/2011	70 FR 37160	6/28/2005	
<b>Sockeye</b>						
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 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 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)
4/30/2004	Puget Sound Chinook (until reinitiated)
6/13/2005	California coastal Chinook (until reinitiated)
4/30/2010	Sacramento River winter Chinook (until reinitiated)
4/26/2012	Lower Columbia River Chinook (until reinitiated)
4/9/2015	Lower Columbia River natural coho (until reinitiated)

Amendment 12 to the 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, 2017, NMFS provided guidance on protective measures for species listed under the ESA during the 2017 fishing season. The letter summarized the requirements of NMFS’ BOs on the effects of potential actions under the salmon FMP on listed salmon and described the consultation standards of the BOs in preparation for the 2017 management season, as well as further guidance and recommendations for the 2017 management season.

The ESA consultation standards, exploitation rates, and other criteria in place for the 2017 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 FMP and ESA standards for other stocks (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 ESA-listed Chinook and coho, Council-managed fisheries have substantive impacts on SRWC, Central Valley spring Chinook, California coastal Chinook, Snake River wild (SRW) fall Chinook, 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:

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<b>Chinook</b>	
Snake River spring/summer (threatened)	Puget Sound (threatened)
Upper Willamette (threatened)	Upper Columbia River spring (endangered)
<b>Sockeye</b>	
Snake River (endangered)	Ozette Lake Sockeye (threatened)
<b>Chum</b>	
Columbia River (threatened)	Hood Canal summer (threatened)
<b>Steelhead</b>	
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)	

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## 5.0 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 Pacific Salmon Commission (PSC) is the body formed by the governments of Canada and the United States to implement the PST.

### 5.1 Chinook Salmon Management

The current Chinook agreement under the PST was negotiated in 2008 and formally accepted by both the U.S. and Canada in December of 2008. This agreement took effect on January 1, 2009, and included a 30 percent reduction in the catch ceilings for aggregate abundance based management (AABM) fisheries off West Coast Vancouver Island (WCVI) and a 15 percent reduction in the catch ceilings for AABM fisheries in Southeast Alaska 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 individual stock based management (ISBM) provisions of Annex 4, Chapter 3, adopted in 1999. These provisions

require the 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 Chinook indicator stocks identified in Attachment V of the PST that fail to 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 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 Chinook indicator stocks identified in Attachment IV of the PST that fail to 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 2017 include, (1) meeting domestic conservation obligations for Strait of Georgia and Fraser River stream-type stocks; (2) Chinook harvests by First Nations fisheries; and (3) incidental impacts during commercial and First Nations fisheries directed at sockeye, pink, and chum salmon. The fishery regulatory package off WCVI was driven by levels of allowable impact on WCVI and Lower Strait of Georgia Chinook and Interior Fraser (Thompson River) coho.

## **5.2 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 abundance of the management units.

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 exploitation 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. For Washington coastal coho management units, the categorical status is determined from the forecast abundance and breakpoints calculated from the lower bounds of the escapement goal range.

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. Under these rules, the most restrictive constraints for Canadian fisheries on U.S. coho management units in 2017 are 11 percent for Skagit and Stillaguamish coho, and 12 percent for Queets coho.

For 2017, Puget Sound and Washington coast coho constraints are as follows:

FMP Stock	Total Exploitation Rate Constraint <sup>a/</sup>	Categorical Status <sup>a/</sup>
Skagit	20%	Critical
Stillaguamish	20%	Critical
Snohomish	40%	Low
Hood Canal	65%	Normal
Strait of Juan de Fuca	40%	Low
Quillayute Fall	59%	
Hoh	65%	
Queets	65%	
Grays Harbor	65%	

**PST Southern Coho Management Plan**

U.S. Management Unit	Total Exploitation Rate Constraint <sup>b/</sup>	Categorical Status <sup>c/</sup>
Skagit	20%	Low
Stillaguamish	20%	Low
Snohomish	40%	Moderate
Hood Canal	65%	Abundant
Strait of Juan de Fuca	40%	Moderate
Quillayute Fall <sup>c/</sup>	60%	Abundant
Hoh <sup>c/</sup>	66%	Abundant
Queets <sup>c/</sup>	20%	Low
Grays Harbor <sup>c/</sup>	29%	Moderate

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 allow able 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 the exploitation rate associated with meeting the escapement goal (or the low er end of the escapement goal range). This also becomes the maximum allow able rate unless the stock is in the "Low" status. In that case an ER of up to 20% is allow ed.

Key considerations for Canadian fishery management for coho in 2017 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 Chinook, sockeye, pink 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 will be driven by Canadian domestic allowable impacts on the Thompson River component of the Interior Fraser management unit. With the exception of 2014, in recent years Canadian fisheries have been managed so as not to exceed a three percent maximum exploitation rate and are expected to do so again in 2017.

The projected status of Canadian coho management units in 2017 indicates continuing concerns for the condition of Interior Fraser coho. The Interior Fraser coho management unit remains in low status, constraining the total mortality fishery exploitation rate for 2017 Southern U.S. fisheries to a maximum of 10.0 percent.

## 6.0 CHINOOK SALMON MANAGEMENT

### 6.1 North of Cape Falcon

Abundance projections important to Chinook harvest management north of Cape Falcon in 2017 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 250,800, which is slightly higher than the 2016 preseason expectation of 223,300. The 2017 LRH forecast abundance is 92,400, lower than the forecast of 133,700 in 2016. The 2017 SCH forecast abundance is 158,400, which is higher than last year's forecast of 89,600.

#### 6.1.1 Objectives

Key Chinook salmon management objectives shaping management measures north of Cape Falcon are:

- NMFS consultation standards and annual guidance for ESA-listed stocks as provided in Section 4.0 above. Relevant stocks for the area north of Cape Falcon include LCR natural tule Chinook, Columbia Lower River Wild (LRW) fall Chinook, SRW fall Chinook, and Puget Sound Chinook.

#### 6.1.2 Achievement of Objectives

Fishery quotas under the adopted management measures are presented in Table 4. Stock-specific management criteria and their forecast values are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality estimates are summarized in Table 6. Table 7 provides a breakdown of impacts by fishery and area for LCR tule Chinook.

- *LCR natural tule fall Chinook.* The projected exploitation rate in the adopted management measures is 36.9 percent, below the 41.0 percent maximum for 2017. LCR natural tule fall Chinook will not constrain ocean fisheries north of Cape Falcon in 2017.
- *LRW fall Chinook:* The adopted management measures have a projected ocean escapement of 13,600 adults, which is more than enough to meet the ESA consultation standard of an adult spawning escapement of at least 5,700 in the North Fork Lewis River. LRW Chinook will not constrain ocean fisheries north of Cape Falcon in 2017.
- *SRW fall Chinook.* The adopted management measures have an ocean exploitation rate of 48.0 percent of the base period exploitation rate, 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 2017.
- *Puget Sound Chinook:* The State of Washington and the Puget Sound treaty tribes reached agreement on a package of fisheries to be modeled prior to the Council's final adoption of the proposed action. The impacts of Council-area fisheries on Puget Sound stocks, combined with this package of inside fisheries, meet all the requirements for ESA-listed Puget Sound Chinook described in the March 3, 2017 letter from NMFS and the applicable Biological Opinion.

The adopted management measures for Council-area Chinook fisheries north of Cape Falcon satisfy NMFS ESA consultation standards and guidance, FMP conservation objectives, and all other objectives for relevant Chinook stocks (Table 5).



## 6.2 South of Cape Falcon

Status of Chinook stocks important to 2017 Chinook harvest management south of Cape Falcon are:

- *KRFC*. The forecast for this stock is 42,000 age-3, 10,600 age-4, and 1,700 age-5 fish. Last year's preseason forecast was 93,400 age-3, 45,100 age-4, and 3,700 age-5 fish.
- *SRWC*. No abundance forecast is made for this stock. The geometric mean of the most recent three years of escapement is 2,521 fish which represents a decrease in this quantity relative to last year.
- *SRFC*. The SI forecast is 230,700, which is lower than last year's preseason forecast of 299,600.

### 6.2.1 Objectives

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

- A *KRFC* natural area spawner escapement of at least 11,379 adults, which is produced, in expectation, by a maximum exploitation rate of 8.1 percent (FMP control rule).
- NMFS consultation standards and annual guidance for ESA-listed stocks as provided in Section 4.0 above. Relevant stocks for the area south of Cape Falcon include *SRWC*, California coastal Chinook, *SRW* fall Chinook, and *LCR* natural tule Chinook.

In 2017, invoking *de minimis* fishing rates that were adopted under FMP Amendment 16 will be necessary because *KRFC* potential spawner abundance is projected to be less than 54,267 natural-area adults, the abundance at which the harvest control rule allows for a projected natural-area adult escapement of less than *SMSY*. The FMP includes the following guidance with regard to *de minimis* exploitation rates: "When recommending an allowable *de minimis* exploitation rate in a given year, the Council shall also consider the following circumstances:

- The potential for critically low natural spawner abundance, including considerations for substocks that may fall below crucial genetic thresholds;
- Spawner abundance levels in recent years;
- The status of co-mingled stocks;
- Indicators of marine and freshwater environmental conditions;
- Minimal needs for tribal fisheries;
- Whether the stock is currently in an approaching overfished condition;
- Whether the stock is currently overfished;
- Other considerations as appropriate".

At the March 2017 PFMC meeting, each of the circumstances above were discussed by the Council and its advisors during the development of the three Alternatives for south of Cape Falcon fisheries (except tribal needs which were not determined). The risk for substocks to fall below crucial genetic thresholds in 2017 was expected to be substantial (> 80 percent) under either a no-fishing scenario or fishing at the *de minimis* level. In 2016, although forecasted to be much higher, the actual *KRFC* spawner escapement was well below both the *SMSY* and minimum stock size threshold specified in the FMP. Regarding the status of co-mingled stocks, the STT reported that the primary stocks that co-mingle with *KRFC* have relatively low forecast abundance for 2017. NMFS' Northwest and Southwest Fisheries Science Centers presented information indicating that the broods that will contribute to 2017 harvest and escapement encountered poor ocean conditions in the California Current Ecosystem. *KRFC* meet the FMP criteria for approaching an overfished condition in Preseason Report I (PFMC 2017b), although NMFS has not yet made a formal determination. Finally, *KRFC* are not considered to be overfished at this time.

At the April 2017 PFMC meeting, these concerns were again discussed by the Council. It was agreed that the KRFC harvest control rule was being implemented as intended, which has led to the highly limited seasons south of Cape Falcon that employ restrictive time/area closures. These include closures of both the commercial and recreational salmon fisheries in the Oregon and California portions of the KMZ and the commercial fishery off central Oregon south of Florence South Jetty. Commercial and recreational fishing opportunity is limited in the Fort Bragg area to times when catch and effort are typically low, and commercial fisheries south of Point Arena are limited in scope as well.

## 6.2.2 Achievement of Objectives

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

- *KRFC*. The control rule-defined minimum of 11,379 natural area adult spawners is met by the adopted management measures.
- *SRWC*. The ESA consultation standard that (1) limits the age-3 impact rate in 2017 fisheries south of Point Arena to a maximum of 15.8 percent and (2) specifies time/area closures and minimum size limit constraints south of Point Arena, is met by the adopted management measures.
- *SRFC*. The control rule-defined minimum of 122,000 hatchery and natural area adult spawners is met by the adopted management measures.
- *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 the adopted management measures.
- *LCR natural tule fall Chinook*. The 2017 maximum exploitation rate of 41.0 percent is met by the adopted management measures.
- *SRW fall Chinook*. SRW Chinook will not constrain ocean fisheries south of Cape Falcon in 2017.

The adopted management measures 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).

## 7.0 COHO SALMON MANAGEMENT

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

- *OPI Hatchery coho.* The 2017 forecast for hatchery coho from the Columbia River and the coast south of Cape Falcon of 394,300 is lower than the 2016 forecast of 396,500. The Columbia River early coho forecast is 231,700 compared to the 2016 forecast of 153,700 and the Columbia River late coho forecast is 154,600, compared to the 2016 forecast of 226,900.
- *OCN coho.* The 2017 OCN forecast is 101,900 compared to the 2016 forecast of 152,700.
- *LCN coho.* The 2017 LCN forecast is 30,100 compared to the 2016 forecast of 40,000.
- *Washington coastal coho.* Queets wild coho are forecast to be in the low abundance category under the PST in 2017 and will constrain ocean fisheries.
- *Puget Sound coho.* Among Puget Sound natural stocks, Skagit and Stillaguamish are in the critical category in 2017 under the FMP (low category under the PST).
- *Interior Fraser (Thompson River) coho.* This Canadian stock continues to be depressed, but is unlikely to constrain 2017 ocean coho fisheries north of Cape Falcon.

### 7.1 Objectives

Key coho management objectives shaping management measures in 2017 Council area fisheries are:

- NMFS consultation standards and annual guidance for ESA-listed stocks are provided in Section 4.0. 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 2017 are: a combined marine/freshwater exploitation rate not to exceed 30.0 percent for OCN coho, a combined exploitation rate in marine-area and mainstem Columbia River fisheries not to exceed 18.0 percent for LCN coho, and a marine exploitation rate not to exceed 13.0 percent for Rogue/Klamath (RK) hatchery coho, used as a surrogate for the SONCC coho ESU. Furthermore, coho retention is prohibited in all California ocean fisheries.
- FMP conservation objectives and obligations under Section 5.2. of the PST Southern Coho Management Plan for stocks originating along the Washington coast, Puget Sound, and British Columbia. In 2017, Queets wild coho is the key management stock for ocean fisheries north of Cape Falcon. Tribal and WDFW comanagers agreed to a 2017 escapement objective of 5,130 Queets wild coho as allowed under section 3.2 of the FMP, which resulted in an exploitation rate of 22 percent. The 2017 allowable exploitation rate for wild Queets coho under the PST Southern Coho Management Plan is 20 percent. The PSC southern panel was consulted and agreed to allow for a 22 percent exploitation rate in 2017.

### 7.2 Achievement of Objectives

Fishery quotas under the adopted management measures are presented in Table 4. Stock-specific management criteria and their forecast values are provided in Table 5. Projected fishery landings, bycatch, and bycatch mortality 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*. The adopted management measures satisfy the maximum 18.0 percent exploitation rate for combined marine and mainstem Columbia River fisheries, with a marine exploitation rate of 7.9 percent and a mainstem Columbia River exploitation rate of 3.5 percent.
- *OCN coho*. The adopted management measures satisfy the maximum 30.0 percent exploitation rate for combined marine and freshwater fisheries, with a marine exploitation rate of 8.0 percent and a freshwater exploitation rate of 1.4 percent.
- *Washington coastal wild coho*. The adopted management measures provide ocean escapement numbers of 47,900, 5,800, 5,700, and 15,300 for Grays Harbor, Queets, Hoh, and Quillayute natural coho respectively. These ocean escapement levels meet FMP management objectives for Grays Harbor, Hoh, and Quillayute, or objectives agreed to by WDFW and the treaty tribes for Queets.
- *Interior Fraser coho*. The Southern U.S. exploitation rates in the adopted management measures total 7.6 percent, which complies with the 10.0 percent maximum required by the PST Southern Coho Management Plan.

As noted above, the projected escapement of Queets wild coho is below the FMP escapement objective. Thus, the adopted management measures do not meet the FMP management objective. In addition, the forecast abundance for Queets wild coho places it in the low abundance category under the PST, which places a maximum allowable exploitation rate of 20% on this management unit. However, the FMP allows co-managers to agree to manage for a lower objective under unusual circumstances. This year the co-managers agreed to manage for a spawning escapement of 5,130. This results in a total exploitation rate of 22 percent, which exceeds the allowable rate for management units in the low abundance category under the PST. The Pacific Salmon Commission's Southern Panel concurred with an exception to this limit under Chapter 5, Paragraph 11(c) of the PST. The result is that proposed action is in compliance with provisions of both the FMP and the PST.

The adopted management measures for coho fisheries satisfy NMFS ESA consultation standards and guidance, FMP objectives (including those temporarily modified for 2017 by emergency rule), and all other objectives for relevant coho stocks other than and including those listed in Table 5.

## **8.0 PINK SALMON MANAGEMENT**

Pink salmon are sufficiently abundant to merit management consideration in 2017. Impacts on Chinook and coho in pink-directed fisheries were part of negotiations to reach a final agreement in North of Cape Falcon ocean and Puget Sound fisheries.

## **9.0 IMPORTANT FEATURES OF THE ADOPTED MANAGEMENT MEASURES**

Significant changes from recent seasons are highlighted below, but this section is not intended to be a comprehensive description of the adopted management measures. For detailed information on the adopted ocean salmon seasons see Table 1 (non-Indian commercial), Table 2 (recreational), and Table 3 (treaty Indian).

Adopted management measures in the area north of Cape Falcon address expected low natural coho returns to the Queets and some Puget Sound rivers. The 2017 Chinook TAC is increased relative to 2016 due to a higher abundance of Columbia River Spring Creek Hatchery fall Chinook and lower expected impacts in northern fisheries. Coho fisheries are limited to minimize impacts on stocks of concern.

Fisheries south of Cape Falcon are primarily constrained by KRFC, where an extremely low abundance forecast results in a maximum allowable exploitation rate of 8.1 percent per *de minimis* fishing criteria in

the FMP. Fisheries south of Point Arena, and particularly south of Pigeon Point, are also constrained due to conservation concerns for ESA-listed SRWC. In response to these concerns, CDFW recommended additional time/area closures beyond what is required by the ESA consultation standard for SRWC (see agenda item E.3.a, Supplemental CDFW Report, March 2017 PFMC meeting).

### *9.1 Commercial*

North of Cape Falcon, sixty percent of the non-Indian troll Chinook quota is assigned to the May-June fishery, which opens seven days per week May 1 through June 30. A landing and possession limit of 60 Chinook per vessel per calendar week (Monday through Sunday) in the area between the U.S./Canada border and the Queets River is in effect; no coho retention is allowed. Chinook sub-quotas were applied to the area between the U.S./Canada border and the Queets River and to the area between Leadbetter Point and Cape Falcon during the spring fishery. The summer fishery in the area north of Cape Falcon opens for all salmon July 1 through 4, then five days per week July 7 through September 19. Landing and possession limits of 60 Chinook and 10 coho per vessel per open period in the area between the U.S./Canada border and the Queets River or 75 Chinook and 10 coho per vessel per open period in the area between the Queets River and Cape Falcon are in effect. A Chinook sub-quota was applied to the area between the U.S./Canada border and the Queets River during the summer fishery.

For the northern Oregon coast between Cape Falcon and Florence South Jetty, Chinook fisheries opened on April 15 and will run continuously through May. The fishery will be open most of June and July, and the entire months of September and October. Weekly landing and possession limits will be in place for September and October. The September and October fishery will be restricted to inside the 40 fathom regulatory line.

Commercial fisheries from Florence South Jetty, Oregon, to Horse Mountain, California, will be closed in 2017. This includes the central Oregon management area, and both the Oregon and California portions of the KMZ.

Fishing opportunity in the Fort Bragg area will be limited to a 3,000 Chinook quota in September. This quota fishery will be open Friday through Tuesday with open period landing and possession limits in place.

The San Francisco area will be open for most of August and all of September. The Monday through Friday fall area target zone fishery between Point Reyes and Point San Pedro will occur during the first half of October.

Fisheries south of Pigeon Point will open on May 1 and run continuously until June 30.

### *9.2 Recreational*

The recreational fishery north of Cape Falcon opens for all salmon on June 24 in most areas (July 1 in the area between the Queets River and Leadbetter Point) through September 4 or when Chinook or coho quotas are attained. The recreational Chinook quota of 45,000 is increased compared to 35,000 Chinook in 2016. The recreational quota of 42,000 coho is an increase over the 2016 quota of 18,900, and coho retention is allowed in all areas north of Cape Falcon in 2017.

For the north and central Oregon coast south of Cape Falcon, the Chinook fishery opened March 15 and will run uninterrupted through October. Coho fisheries consist of a mark-selective coho quota fishery beginning in late June for the area from Cape Falcon to Humbug Mountain and a non-mark-selective coho quota fishery beginning on September 2 in the same area.

Fisheries in both the Oregon and California portions of the KMZ will be closed in 2017.

For all areas south of the KMZ, the season began on April 1. Minimum size limits range from 20 to 24 inches, with higher size limits in the south to protect SRWC, which tend to be smaller compared to other Chinook stocks.

The Fort Bragg area will be open for the months of April and May, and then will close for much of the summer. The fishery will reopen on August 15 and run until November 12.

In the San Francisco area, the fishery will be open through the end of October, with a two week closure during the first half of May.

The Monterey north area will remain open uninterrupted through July 15, while the area south of Point Sur will close on May 31.

### **9.3 Treaty Indian**

The adopted management measures for Chinook fisheries are generally similar in structure to recent years, and coho retention is allowed in the summer season. The Treaty Indian troll fishery opens on May 1 with a Chinook only fishery and runs through June 30 with a 20,000 sub-quota. The summer fishery opens on July 1 and runs through September 15 with a sub-quota of 20,000 Chinook and 12,500 coho. The Treaty Indian fishery management areas are located between the U.S./Canada border and Pt. Chehalis, Washington (Table 3, C.1).

## **10.0 SOCIOECONOMIC IMPACTS OF THE ADOPTED MANAGEMENT MEASURES**

### **10.1 Economic Impacts**

The short-term economic effects of the Council-adopted management measures for non-Indian fisheries are shown in Tables 9 and 10. Table 9 shows projected commercial troll impacts by catch area expressed in terms of estimated potential exvessel value. Table 10 shows projected recreational fisheries impacts by management area in terms of the number of projected angler-trips and community personal income impacts generated by those activities. Note that exvessel revenue values shown 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 3 and 4, which show estimated community income impacts under the Council-adopted commercial troll and recreational fishery management measures, respectively, compared to historic levels in real (inflation-adjusted) dollars. Income impacts indicate the amount of income generated by the economic linkages associated with commercial and recreational fishing. While reductions in income impacts associated with an activity 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.

Note that the management areas listed in Tables 9 and 10 and Figures 3 and 4 differ slightly from the areas shown in Tables 9 and 10 and Figures 1 and 2 of this year's Preseason Report II and the regulatory documents for prior years' ocean salmon fisheries. Specifically, the KMZ region "Humbug Mt. to Horse Mt." has been split into an Oregon KMZ portion (Humbug Mt. to the OR/CA Border) and a California KMZ portion (OR/CA Border to Horse Mt.); and the region South of Pt. Arena has been split into "Pt. Arena to Pigeon Pt." (mirroring the San Francisco ocean management area) and "South of Pigeon Pt." (mirroring the Monterey ocean management area). While this change tends to make certain kinds of comparisons between historic values and values projected under the Preseason II Alternatives somewhat less straightforward, it was done to highlight the economic effects of differential salmon fishery management measures between the regions. It is anticipated that these new, less highly aggregated regions

will be used to display and compare economic impacts in future years' salmon fishery regulatory documents.

Total economic effects may vary from what is indicated by the short-term impacts from ocean fisheries activities reported in Tables 9 and 10 and Figures 3 and 4. Salmon that remain unharvested in the ocean do not necessarily represent an economic loss, as they may augment inside harvests or provide additional spawning escapement that contribute to ocean abundance in subsequent years. Restricting 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) representing lower costs for commercial harvesters and/or higher success rates for recreational fishers. Salmon that remain unharvested by both ocean fisheries and inside fisheries may impact future production, although the magnitude of this effect varies depending on the biology of the affected stocks, habitat, and environmental factors.

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 salmon caught in certain catch areas being delivered 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 patterns. The patterns are typically inferred from the most recent year's catch and landings data. For example, in 2016 there were deliveries of salmon caught between Cape Falcon and Humbug Mountain to landing ports in the Oregon KMZ region; and deliveries of salmon caught south of Horse Mountain to landing ports in the California KMZ region. There were also transfers of harvest between other catch areas and landing ports, but these were relatively small by comparison.

The expected harvest levels used to model commercial fishery impacts are taken from Table 6. Estimated harvests include relatively small amounts occurring in state waters only (SWO) fisheries off central and southern Oregon. These total harvest estimates combined with the prior year's average Chinook weights per fish and exvessel prices per pound were assumed to be the best indicators of expected revenues in the coming season. Coastwide average Chinook weight per fish in 2016, although slightly higher than the prior year, was relatively low compared with recent history; however coastwide average Chinook exvessel prices in 2016 were the highest in inflation-adjusted terms since 1977. If this year's actual average weight per fish or exvessel prices diverge significantly from what was observed in 2016, then salmon exvessel revenues and resulting commercial fisheries income impacts projected in this document may prove to be correspondingly biased. Unless otherwise noted, the economic effects of the commercial and recreational fisheries summarized below are compared in terms of estimated community income impacts.

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 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*. Estimated effort includes relatively small amounts occurring in SWO fisheries off central and southern Oregon.

Recreational fishery effort north of Cape Falcon was estimated using historical CPUE estimates ("success rates") applied to salmon quotas and expected harvest levels. Coho quotas north of Cape Falcon for the summer mark-selective coho fishery increased compared to 2016, but remain below the recent average. Quotas for Chinook, while still restrictive compared with the recent past, also increased from last year. Projections of recreational catch north of Cape Falcon were made by applying the historic ratios of recorded catch to the actual quotas multiplied by the proposed quotas for the two species. Effort and economic

impacts were then estimated by applying recent year weighted average coho and Chinook angler success rates to the north of Cape Falcon coho and Chinook catch projections.

## 10.2 Community Impacts

Projected income impacts under the Proposed Action in coastal communities adjacent to commercial and recreational salmon fisheries' management areas are shown in Figure 3 and Figure 4, and comparisons of impacts under the Proposed Action with impacts under the other Alternatives are summarized in Table 11. Projected coastwide income impacts from commercial salmon landings and processing under the Proposed Action are within the range analyzed under the Alternatives, and overall are about 9 percent higher than estimated total coastwide commercial fisheries income impacts last year (Table 11). Regionally the picture is mixed, with commercial fisheries income impacts under the Proposed Action projected to be below last year's levels and the 2012-2016 inflation-adjusted averages in all management areas except north of Cape Falcon and south of Pigeon Point. In those two areas, commercial fisheries income impacts under the Proposed Action are projected to be above their 2016 levels (Figure 3). In the Oregon KMZ, California KMZ and the area from Horse Mountain to Point Arena, income impacts from commercial fisheries are projected to be potentially the lowest since 2010.<sup>1</sup>

Projected income impacts from expenditures by recreational salmon anglers under the Proposed Action are within the range analyzed under the Alternatives, and overall are about 58 percent above the estimated total coastwide recreational fisheries income impact from last year (Table 11). This coastwide result obscures some regional variation, with recreational fisheries income impacts projected to be lower under the Proposed Action than last year's levels in the area from Horse Mountain to Point Arena, and zero in the California KMZ, but higher than last year's estimated values in all other management areas. Compared with the 2012-2016 inflation-adjusted average, recreational fisheries income impacts are projected to be at least somewhat lower under the Proposed Action in every management area except the areas from Point Arena to Pigeon Point (SF) and South of Pigeon Point (MO) (Figure 4).

## 10.3 Social Impacts

The effect of the Proposed Action on other indicators of community social welfare (e.g., poverty, divorce rates, graduation/dropout rates, incidents of domestic violence, etc.) cannot be directly measured. Change in personal income in communities may be used as a rough proxy for other socioeconomic effects to the degree change in these indicators correlates with potential change in income. However, changes in the broader regional economy ("cumulative effects") and long-term trends in fishery-related employment are more likely to drive these indicators of social wellbeing than the short-term economic effects of the Proposed Action.

To the extent practicable, social impacts were considered when non-tribal commercial and recreational salmon seasons were shaped. To minimize regulatory complexity in recreational fisheries, season dates and regulations were kept as consistent as possible within major management areas. Minimum size limits either remain consistent throughout the season or decrease during the season, which, in addition to biological benefits, tend to increase regulatory compliance. Efforts were made to accommodate important cultural events such as the Independence Day and Labor Day holidays as well as traditional fishing derby events. Commercial fisheries often include vessel limits per trip or per open period in an effort to stretch quota attainment over a greater period of time. Doing so can provide greater access for smaller vessels, increase safety at sea by making it easier to avoid inclement weather, improve marketing opportunities, and extend the period during which consumers have access to fresh, wild caught salmon. Notification

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<sup>1</sup> Projected income impacts in the Oregon KMZ are from assumed Oregon state-waters-only fisheries, while income impacts in the California KMZ derive from deliveries of salmon caught in the areas further south to ports in the California KMZ region.



mechanisms by phone or email allow commercial vessels greater flexibility in choosing a port of landing to take advantage of better markets or to access better infrastructure.

Salmon are an important part of tribal culture and have been since time immemorial. Salmon provide economic, cultural, ceremonial, and subsistence benefits to west coast tribal communities. Under the Proposed Action, based on the adopted Chinook and coho quotas, Washington coastal treaty tribes are projected to have greater ocean salmon fishery opportunities compared with 2016 (Table 6). The Klamath River tribal share under the Proposed Action is 814 adult KRFC, a substantial decrease from the 2016 allocation of 7,404, primarily due to the lower expected abundance of KRFC in 2017.

## **11.0 ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION**

The Proposed Action, adoption of the 2017 ocean salmon regulations, was assessed relative to the environmental components and criteria established in Preseason Report II (Part 2 of this EA). The impacts of the Proposed Action on most target stocks and ESA-listed salmon fall within the range of impacts analyzed for the Alternatives in Preseason Report II. For stocks where the impacts of the Proposed Action fall outside the range of impacts under the Alternatives in Preseason Report II (Skagit coho, Snohomish coho, and Hood Canal coho), such impacts differ only in small amounts from those of the Alternatives and result from shaping fisheries within Puget Sound, and are within the impact limitations of the FMP, ESA consultation standards, and PST (Table 11). Economic impacts of the Proposed Action fall within the range of impacts projected for the Alternatives in Preseason Report II as summarized in Table 11.

Under No Action, the seasons would be the same as in 2016. The No Action Alternative would result in several stocks not meeting conservation objectives, and thus would not meet the purpose and need of the Proposed Action. Although not true for all regions, relative to No Action (as represented by the 2016 values) the Proposed Action would provide greater coastwide income impacts from recreational fishing and also greater coastwide income impacts from commercial fishing (Table 11).

As stated in Preseason Report II, it was not possible to discern differences in the effects of the Alternatives or Proposed Action on other components of the environment (non-target fish species, marine mammals, other ESA-listed species, sea birds, biodiversity and ecosystem function, and public health and safety), and the effects were not expected to be significant.

TABLE 1. 2017 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted.  
(Page 1 of 6)

<b>A. SEASON DESCRIPTIONS</b>
<b>North of Cape Falcon</b>
<b>Supplemental Management Information</b>
<p>1. Overall non-Indian TAC: 90,000 Chinook and 47,600 coho marked with a healed adipose fin clip (marked).                  2. Non-Indian commercial troll TAC: 45,000 Chinook and 5,600 marked coho.                  3. Trade: May be considered during 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.</p>
<p>Model #: Coho-1731, Chinook 2017</p>
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>May 1 through the earlier of June 30 or 27,000 Chinook, no more than 8,900 of which may be caught in the area between the U.S./Canada border and the Queets River and no more than 9,000 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8).</li> </ul> <p>In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 60 Chinook per vessel per calendar week (Monday through Sunday) will be in place.</p> <p>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 360-249-1215 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 360-249-1215 with area fished, total Chinook and halibut catch aboard, and destination. When it is projected that approximately 75% of the overall Chinook guideline has been landed, or approximately 75% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border and the Queets River, or approximately 75% of the Chinook subarea guideline has been landed in the area between Leadbetter Pt. and Cape Falcon, inseason action will be considered to ensure the guideline is not exceeded. See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p>
<p><b>U.S./Canada Border to Cape Falcon</b></p> <ul style="list-style-type: none"> <li>July 1-4, July 7-September 19 or 18,000 Chinook or 5,600 coho whichever comes first; no more than 7,200 Chinook may be caught in the area between the U.S./Canada border and the Queets River (C.8).</li> </ul> <p>Open five days per week, Friday through Tuesday. In the area between the U.S./Canada border and the Queets River, a landing and possession limit of 60 Chinook and 10 coho per vessel per open period will be in place (C.1, C.6). In the area from the Queets River to Cape Falcon, a landing and possession limit of 75 Chinook and 10 coho per vessel per open period will be in place (C.1, C.6).</p> <p>Chinook minimum size limit of 28 inches total length. Coho minimum size limit of 16 inches total length (B, C.1). All coho must be marked with a healed adipose fin clip (C.8.c). No chum retention north of Cape Alava, Washington in August and September (C.4, C.7). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 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 360-249-1215 with area fished, total Chinook and halibut catch aboard, and destination. When it is projected that approximately 75% of the overall Chinook guideline has been landed, or approximately 75% of the Chinook subarea guideline has been landed in the area between the U.S./Canada border to the Queets River, inseason action will be considered to ensure the guideline is not exceeded.</p>
<p>For all commercial troll fisheries north of Cape Falcon: Mandatory Yelloweye Rockfish Conservation Area, Cape Flattery and Columbia Control Zones, and beginning August 14, 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 <a href="mailto:nfalcon.trollreport@state.or.us">nfalcon.trollreport@state.or.us</a>. 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).</p>

TABLE 1. 2017 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted.  
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<b>A. SEASON DESCRIPTIONS</b>
<b>South of Cape Falcon</b>
<b>Supplemental Management Information</b>
<ol style="list-style-type: none"> <li>1. Sacramento River fall Chinook spawning escapement of 133,242 hatchery and natural area adults.</li> <li>2. Sacramento Index exploitation rate of 42.2%.</li> <li>3. Klamath River recreational fishery allocation: 129 adult Klamath River fall Chinook.</li> <li>4. Klamath tribal allocation: 814 adult Klamath River fall Chinook.</li> <li>5. OR/CA share of Klamath River fall Chinook commercial ocean harvest: 59%/41%.</li> <li>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.</li> </ol>
<p><b>Cape Falcon to Florence South Jetty</b></p> <ul style="list-style-type: none"> <li>• April 15-May 31;</li> <li>• June 7-12, June 15-30, July 8-31;</li> <li>• September 1-30, October 1-31 (C.9.a).</li> </ul> <p>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.</p> <p>Beginning September 1 no more than 45 Chinook per vessel per landing week (Thurs.-Wed.); and only open shoreward of the 40 fathom regulatory line (C.5.f).</p> <p>In 2018, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length (B, C.1). Gear restrictions same as in 2017 (C.2, C.3, C.4, C.6, C.7, C.8). This opening could be modified following Council review at its March 2018 meeting.</p>
<p><b>Florence South Jetty to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• Closed (C.9a).</li> </ul> <p>In 2018, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length (B, C.1). Gear restrictions same as in 2017 (C.2, C.3, C.4, C.6, C.7, C.8). This opening could be modified following Council review at its March 2018 meeting.</p>
<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• Closed (C.9.a).</li> </ul> <p>In 2018, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length (B, C.1). Gear restrictions same as in 2017 (C.2, C.3, C.4, C.6, C.7, C.8). This opening could be modified following Council review at its March 2018 meeting.</p>
<p><b>OR/CA Border to Humboldt South Jetty (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• Closed (C.9.b)</li> </ul>
<p><b>Humboldt South Jetty to Horse Mt.</b></p> <ul style="list-style-type: none"> <li>• Closed.</li> </ul> <p>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).</p>

TABLE 1. Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted.  
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<b>A. SEASON DESCRIPTIONS</b>
<p><b>Horse Mt. to Point Arena (Fort Bragg)</b> September 1 through the 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 27 inches total length (B, C.1). Landing and possession limit of 60 Chinook per vessel per open period (C.8.e). All fish caught in this area must be landed between the OR/CA border and Point Arena (C.6). All fish must be offloaded within 24 hours of any closure of the fishery and prior to fishing outside the area (C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). In 2018, 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 2017. All fish caught in the area must be landed in the area. This opening could be modified following Council review at its March 2018 meeting.</p>
<p><b>Point Arena to Pigeon Point (San Francisco)</b> 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. All salmon caught in California prior to September 1 must be landed and offloaded no later than 11:59 p.m., August 30 (C.6). In September, all fish must be landed south of Point Arena until the quota in the Fort Bragg fishery is met and the fishery has closed for 24 hours (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p>
<p><b>Point Reyes to Point San Pedro (Fall Area Target Zone)</b> October 2-6 and 9-13. Five days per week, Monday through Friday. 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).</p>
<p><b>Pigeon Point to U.S./Mexico Border (Monterey)</b> May 1-31; June 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). All fish must be landed in California. All salmon caught in California prior to September 1 must be landed and offloaded no later than 11:59 p.m., August 30 (C.6). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p>
<p>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 Fish and Game Code §8226).</p>

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

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28	21.5	16	12	None
Cape Falcon to Humbug Mt.	28	21.5	-	-	None
Humbug Mt. to OR/CA Border	-	-	-	-	-
OR/CA Border to Humboldt S. Jetty	-	-	-	-	-
Horse Mt. to Pt. Arena	27	20.5	-	-	None
Pt. Arena to Pigeon Pt. < Sept. 1	27	20.5	-	-	None
Pt. Arena to Pigeon Pt. ≥ Sept. 1	26	19.5	-	-	None
Pigeon Pt. to U.S./Mexico Border	27	20.5	-	-	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 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 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 90° 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, WDFW, ODFW 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.

C.5. Control Zone Definitions:

- a. *Cape Flattery Control Zone* - The area from Cape Flattery (48°23'00" N. lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava (48°10'00" N. lat.) and east of 125°05'00" W. long.
- b. *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 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 1. 2017 Commercial troll management Alternatives for non-Indian ocean salmon fisheries - Council adopted.  
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**C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (continued)**

f. Waypoints for the 40 fathom regulatory line from Cape Falcon to Humbug Mt. (50 CFR 660.71 (k) (12)-(70).

45°46.00' N. lat., 124°04.49' W. long.;	44°08.38' N. lat., 124°16.79' W. long.;
45°44.34' N. lat., 124°05.09' W. long.;	44°08.30' N. lat., 124°16.75' W. long.;
45°40.64' N. lat., 124°04.90' W. long.;	44°01.18' N. lat., 124°15.42' W. long.;
45°33.00' N. lat., 124°04.46' W. long.;	43°51.61' N. lat., 124°14.68' W. long.;
45°32.27' N. lat., 124°04.74' W. long.;	43°42.66' N. lat., 124°15.46' W. long.;
45°29.26' N. lat., 124°04.22' W. long.;	43°40.49' N. lat., 124°15.74' W. long.;
45°20.25' N. lat., 124°04.67' W. long.;	43°38.77' N. lat., 124°15.64' W. long.;
45°19.99' N. lat., 124°04.62' W. long.;	43°34.52' N. lat., 124°16.73' W. long.;
45°17.50' N. lat., 124°04.91' W. long.;	43°28.82' N. lat., 124°19.52' W. long.;
45°11.29' N. lat., 124°05.20' W. long.;	43°23.91' N. lat., 124°24.28' W. long.;
45°05.80' N. lat., 124°05.40' W. long.;	43°20.83' N. lat., 124°26.63' W. long.;
45°05.08' N. lat., 124°05.93' W. long.;	43°17.96' N. lat., 124°28.81' W. long.;
45°03.83' N. lat., 124°06.47' W. long.;	43°16.75' N. lat., 124°28.42' W. long.;
45°01.70' N. lat., 124°06.53' W. long.;	43°13.97' N. lat., 124°31.99' W. long.;
44°58.75' N. lat., 124°07.14' W. long.;	43°13.72' N. lat., 124°33.25' W. long.;
44°51.28' N. lat., 124°10.21' W. long.;	43°12.26' N. lat., 124°34.16' W. long.;
44°49.49' N. lat., 124°10.90' W. long.;	43°10.96' N. lat., 124°32.33' W. long.;
44°44.96' N. lat., 124°14.39' W. long.;	43°05.65' N. lat., 124°31.52' W. long.;
44°43.44' N. lat., 124°14.78' W. long.;	42°59.66' N. lat., 124°32.58' W. long.;
44°42.26' N. lat., 124°13.81' W. long.;	42°54.97' N. lat., 124°36.99' W. long.;
44°41.68' N. lat., 124°15.38' W. long.;	42°53.81' N. lat., 124°38.57' W. long.;
44°34.87' N. lat., 124°15.80' W. long.;	42°50.00' N. lat., 124°39.68' W. long.;
44°33.74' N. lat., 124°14.44' W. long.;	42°49.13' N. lat., 124°39.70' W. long.;
44°27.66' N. lat., 124°16.99' W. long.;	42°46.47' N. lat., 124°38.89' W. long.;
44°19.13' N. lat., 124°19.22' W. long.;	42°45.74' N. lat., 124°38.86' W. long.;
44°15.35' N. lat., 124°17.38' W. long.;	42°44.79' N. lat., 124°37.96' W. long.;
44°14.38' N. lat., 124°17.78' W. long.;	42°45.01' N. lat., 124°36.39' W. long.;
44°12.80' N. lat., 124°17.18' W. long.;	42°44.14' N. lat., 124°35.17' W. long.;
44°09.23' N. lat., 124°15.96' W. long.;	42°42.14' N. lat., 124°32.82' W. long.;
	42°40.50' N. lat., 124°31.98' W. long.

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 2018 for 2018 permits (*exact date to be set by the IPHC in early 2018*). Incidental harvest is authorized only during April, May, and June of the 2017 troll seasons and after June 30 in 2017 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 IPHC's preseason 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.

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

May 1, 2017 through December 31, 2017, and April 1-30, 2018, license holders may land or possess no more than one Pacific halibut per each two Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio requirement, and no more than 35 halibut may be possessed or landed per trip. Pacific halibut retained must be no less than 32 inches in total length (with head on).

Incidental Pacific halibut catch regulations in the commercial salmon troll fishery adopted for 2017, prior to any 2017 inseason action, will be in effect when incidental Pacific halibut retention opens on April 1, 2018 unless otherwise modified by inseason action at the March 2018 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. 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.
- c. At the March 2018 meeting, the Council will consider inseason recommendations for special regulations for any experimental fisheries (proposals must meet Council protocol and be received in November 2017).
- d. 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.
- e. 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. KMZ Area described: 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

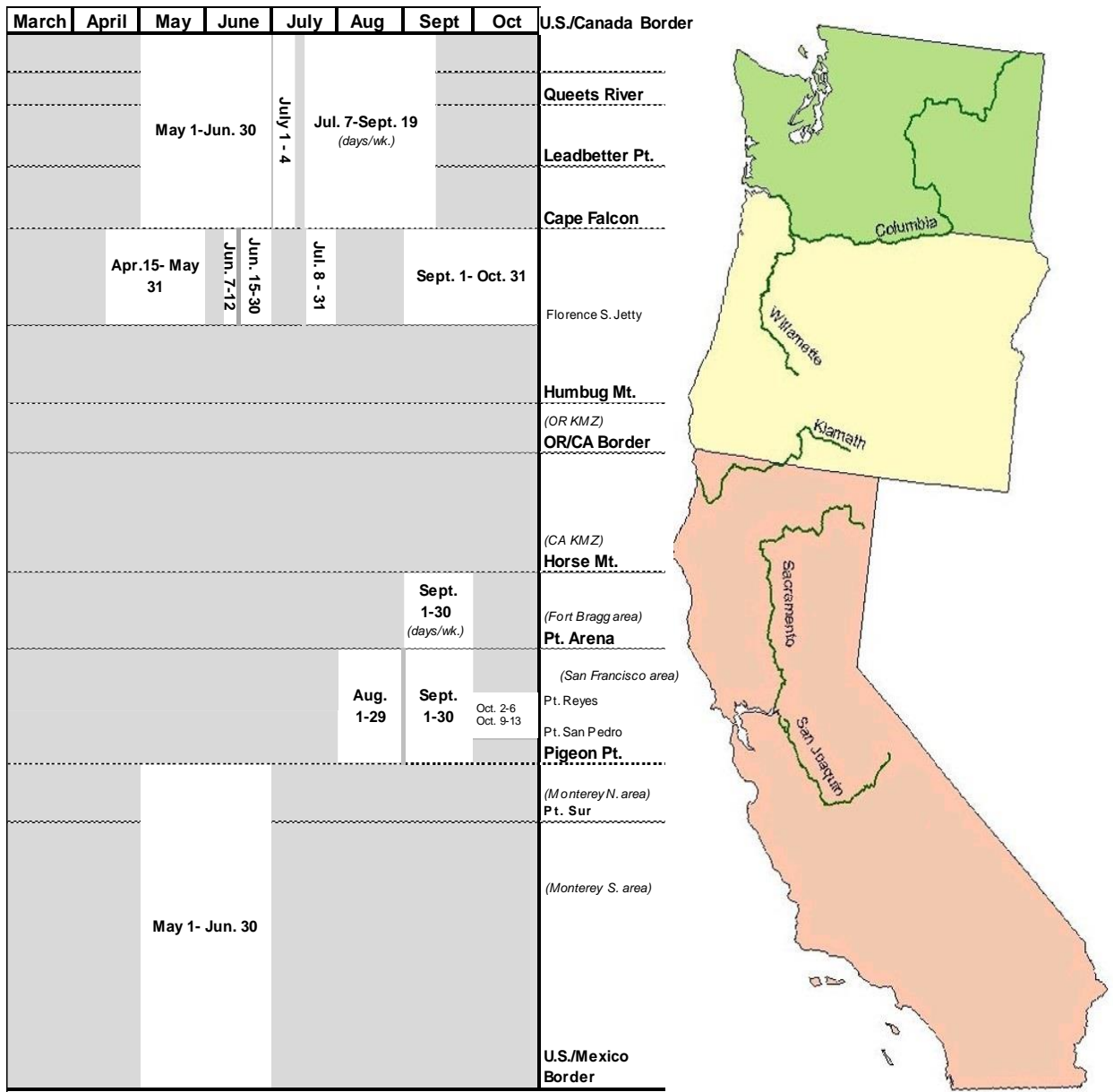


FIGURE 1. Council-adopted non-Indian commercial salmon seasons for 2017.



TABLE 2. 2017 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted.  
(Page 1 of 5)

<b>A. SEASON DESCRIPTIONS</b>
<b>North of Cape Falcon</b>
<b>Supplemental Management Information</b>
<p>1. Overall non-Indian TAC: 90,000 Chinook and 47,600 coho marked with a healed adipose fin clip (marked).                  2. Recreational TAC: 45,000 Chinook and 42,000 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 15,000 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.</p>
<p><b>U.S./Canada Border to Cape Alava (Neah Bay Subarea)</b></p> <ul style="list-style-type: none"> <li>June 24 through earlier of September 4 or 4,370 marked coho subarea quota with a subarea guideline of 7,900 Chinook (C.5). Seven days per week. All salmon, except no chum beginning August 1; two fish per day. All coho must be marked with a healed adipose fin clip (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).</li> </ul>
<p><b>Cape Alava to Queets River (La Push Subarea)</b></p> <ul style="list-style-type: none"> <li>June 24 through earlier of September 4 or 1,090 marked coho subarea quota with a subarea guideline of 2,500 Chinook (C.5). Seven days per week. All salmon, two fish per day. All coho must be marked with a healed adipose fin clip. 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).</li> </ul>
<p><b>Queets River to Leadbetter Point (Westport Subarea)</b></p> <ul style="list-style-type: none"> <li>July 1 through earlier of September 4 or 15,540 marked coho subarea quota with a subarea guideline of 21,400 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 with a healed adipose fin clip (C.1). See gear restrictions and definitions (C.2, C.3). Grays Harbor Control Zone closed beginning August 14 (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).</li> </ul>
<p><b>Leadbetter Point to Cape Falcon (Columbia River Subarea)</b></p> <ul style="list-style-type: none"> <li>June 24 through earlier of September 4 or 21,000 marked coho subarea quota with a subarea guideline of 13,200 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 with a healed adipose fin clip (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).</li> </ul>

TABLE 2. 2017 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted.  
(Page 2 of 5)

<b>A. SEASON DESCRIPTIONS</b>
<b>South of Cape Falcon</b>
<b>Supplemental Management Information</b>
<p>1 Sacramento River fall Chinook spawning escapement of 133,242 hatchery and natural area adults.                  2. Sacramento Index exploitation rate of 42.2%.                  3. Klamath River recreational fishery allocation: 129 adult Klamath River fall Chinook.                  4. Klamath tribal allocation: 814 adult Klamath River fall Chinook.                  5. Overall recreational coho TAC: 18,000 coho marked with a healed adipose fin clip (marked), and 6,000 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 CFGC.</p>
<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• March 15-October 31 (C.6), except as provided below during the all-salmon mark-selective and September non-mark-selective coho fisheries.</li> </ul> <p>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).</p> <ul style="list-style-type: none"> <li>• Non-mark-selective coho fishery: September 2 through the earlier of September 30 or a landed catch of 6,000 coho (C.5). Seven days per week. All salmon, two fish per day (C.1). Chinook minimum size limit of 24 inches total length. Coho minimum size limit of 16 inches total length (B). See gear restrictions and definitions (C.2, C.3).</li> </ul> <p>The all salmon except coho season reopens the earlier of October 1 or attainment of the coho quota (C.5). During October the fishery is only open shoreward of the 40 fathom regulatory line (C.4.f).</p> <p>In 2018, the season between Cape Falcon and Humbug Mountain will open March 15 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 2017 (C.2, C.3). This opening could be modified following Council review at the March 2018 Council meeting.</p> <p>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).</p>
<p><b>Cape Falcon to Humbug Mt.</b></p> <ul style="list-style-type: none"> <li>• All-salmon mark-selective coho fishery: June 24 through the earlier of July 31 or a landed catch of 18,000 marked coho (C.5). Seven days per week. All salmon, two fish per day. All retained coho must be marked with a healed adipose fin clip (C.1). Chinook minimum size limit of 24 inches total length. Coho minimum size limit of 16 inches total length (B). See gear restrictions and definitions (C.2, C.3). Any remainder of the mark-selective quota may be transferred on an impact neutral basis to the September non-mark-selective quota from Cape Falcon to Humbug Mountain. The all salmon except coho season reopens the earlier of August 1 or attainment of the coho quota (C.5.e).</li> </ul> <p>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).</p>
<p><b>Humbug Mt. to OR/CA Border (Oregon KMZ)</b></p> <ul style="list-style-type: none"> <li>• Closed (C.6).</li> </ul>
<p><b>OR/CA Border to Horse Mt. (California KMZ)</b></p> <ul style="list-style-type: none"> <li>• Closed (C.6).</li> </ul>

TABLE 2. 2017 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted.  
(Page 3 of 5)

<b>A. SEASON DESCRIPTIONS</b>
<p><b>Horse Mt. to Point Arena (Fort Bragg)</b></p> <ul style="list-style-type: none"> <li>• April 1-May 31;</li> <li>• August 15-November 12 (C.6).</li> </ul> <p>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).</p> <p>In 2018, season opens April 7 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 2017 (C.2, C.3). This opening could be modified following Council review at the March 2018 Council meeting.</p>
<p><b>Point Arena to Pigeon Point (San Francisco)</b></p> <ul style="list-style-type: none"> <li>• April 1-30;</li> <li>• May 15-October 31 (C.6).</li> </ul> <p>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).</p> <p>In 2018, season opens April 7 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 2017 (C.2, C.3). This opening could be modified following Council review at the March 2018 Council meeting.</p>
<p><b>Pigeon Point to Point Sur (Monterey North)</b></p> <ul style="list-style-type: none"> <li>• April 1-July 15 (C.6).</li> </ul> <p>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).</p> <p>In 2018, season opens April 7 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 2017 (C.2, C.3). This opening could be modified following Council review at the March 2018 Council meeting.</p>
<p><b>Point Sur to U.S./Mexico Border (Monterey South)</b></p> <ul style="list-style-type: none"> <li>• April 1-May 31 (C.6).</li> </ul> <p>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).</p> <p>In 2018, season opens April 7 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 2017 (C.2, C.3). This opening could be modified following Council review at the March 2018 Council meeting.</p>
<p>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)</p>

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

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24	16	None
Cape Falcon to Humbug Mt.	24	16	None
Humbug Mt. to OR/CA Border	-	-	-
OR/CA Border to Horse Mt.	-	-	-
Horse Mt. to Pt. Arena	20	-	20
Pt. Arena to Pigeon Pt. ≤ April 30	24	-	24
Pt. Arena to Pigeon Pt. > April 30	20	-	20
Pigeon Pt. to Pt. Sur	24	-	24
Pt. Sur to U.S./Mexico Border	24	-	24

### 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).

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. 2017 Recreational management Alternatives for non-Indian ocean salmon fisheries - Council adopted.  
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f. Waypoints for the 40 fathom regulatory line from Cape Falcon to Humbug Mt. (50 CFR 660.71 (k) (12)-(70).

45°46.00' N. lat., 124°04.49' W. long.;	44°08.38' N. lat., 124°16.79' W. long.;
45°44.34' N. lat., 124°05.09' W. long.;	44°08.30' N. lat., 124°16.75' W. long.;
45°40.64' N. lat., 124°04.90' W. long.;	44°01.18' N. lat., 124°15.42' W. long.;
45°33.00' N. lat., 124°04.46' W. long.;	43°51.61' N. lat., 124°14.68' W. long.;
45°32.27' N. lat., 124°04.74' W. long.;	43°42.66' N. lat., 124°15.46' W. long.;
45°29.26' N. lat., 124°04.22' W. long.;	43°40.49' N. lat., 124°15.74' W. long.;
45°20.25' N. lat., 124°04.67' W. long.;	43°38.77' N. lat., 124°15.64' W. long.;
45°19.99' N. lat., 124°04.62' W. long.;	43°34.52' N. lat., 124°16.73' W. long.;
45°17.50' N. lat., 124°04.91' W. long.;	43°28.82' N. lat., 124°19.52' W. long.;
45°11.29' N. lat., 124°05.20' W. long.;	43°23.91' N. lat., 124°24.28' W. long.;
45°05.80' N. lat., 124°05.40' W. long.;	43°20.83' N. lat., 124°26.63' W. long.;
45°05.08' N. lat., 124°05.93' W. long.;	43°17.96' N. lat., 124°28.81' W. long.;
45°03.83' N. lat., 124°06.47' W. long.;	43°16.75' N. lat., 124°28.42' W. long.;
45°01.70' N. lat., 124°06.53' W. long.;	43°13.97' N. lat., 124°31.99' W. long.;
44°58.75' N. lat., 124°07.14' W. long.;	43°13.72' N. lat., 124°33.25' W. long.;
44°51.28' N. lat., 124°10.21' W. long.;	43°12.26' N. lat., 124°34.16' W. long.;
44°49.49' N. lat., 124°10.90' W. long.;	43°10.96' N. lat., 124°32.33' W. long.;
44°44.96' N. lat., 124°14.39' W. long.;	43°05.65' N. lat., 124°31.52' W. long.;
44°43.44' N. lat., 124°14.78' W. long.;	42°59.66' N. lat., 124°32.58' W. long.;
44°42.26' N. lat., 124°13.81' W. long.;	42°54.97' N. lat., 124°36.99' W. long.;
44°41.68' N. lat., 124°15.38' W. long.;	42°53.81' N. lat., 124°38.57' W. long.;
44°34.87' N. lat., 124°15.80' W. long.;	42°50.00' N. lat., 124°39.68' W. long.;
44°33.74' N. lat., 124°14.44' W. long.;	42°49.13' N. lat., 124°39.70' W. long.;
44°27.66' N. lat., 124°16.99' W. long.;	42°46.47' N. lat., 124°38.89' W. long.;
44°19.13' N. lat., 124°19.22' W. long.;	42°45.74' N. lat., 124°38.86' W. long.;
44°15.35' N. lat., 124°17.38' W. long.;	42°44.79' N. lat., 124°37.96' W. long.;
44°14.38' N. lat., 124°17.78' W. long.;	42°45.01' N. lat., 124°36.39' W. long.;
44°12.80' N. lat., 124°17.18' W. long.;	42°44.14' N. lat., 124°35.17' W. long.;
44°09.23' N. lat., 124°15.96' W. long.;	42°42.14' N. lat., 124°32.82' W. long.;
	42°40.50' N. lat., 124°31.98' W. long.

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 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 Humbug Mt. 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.

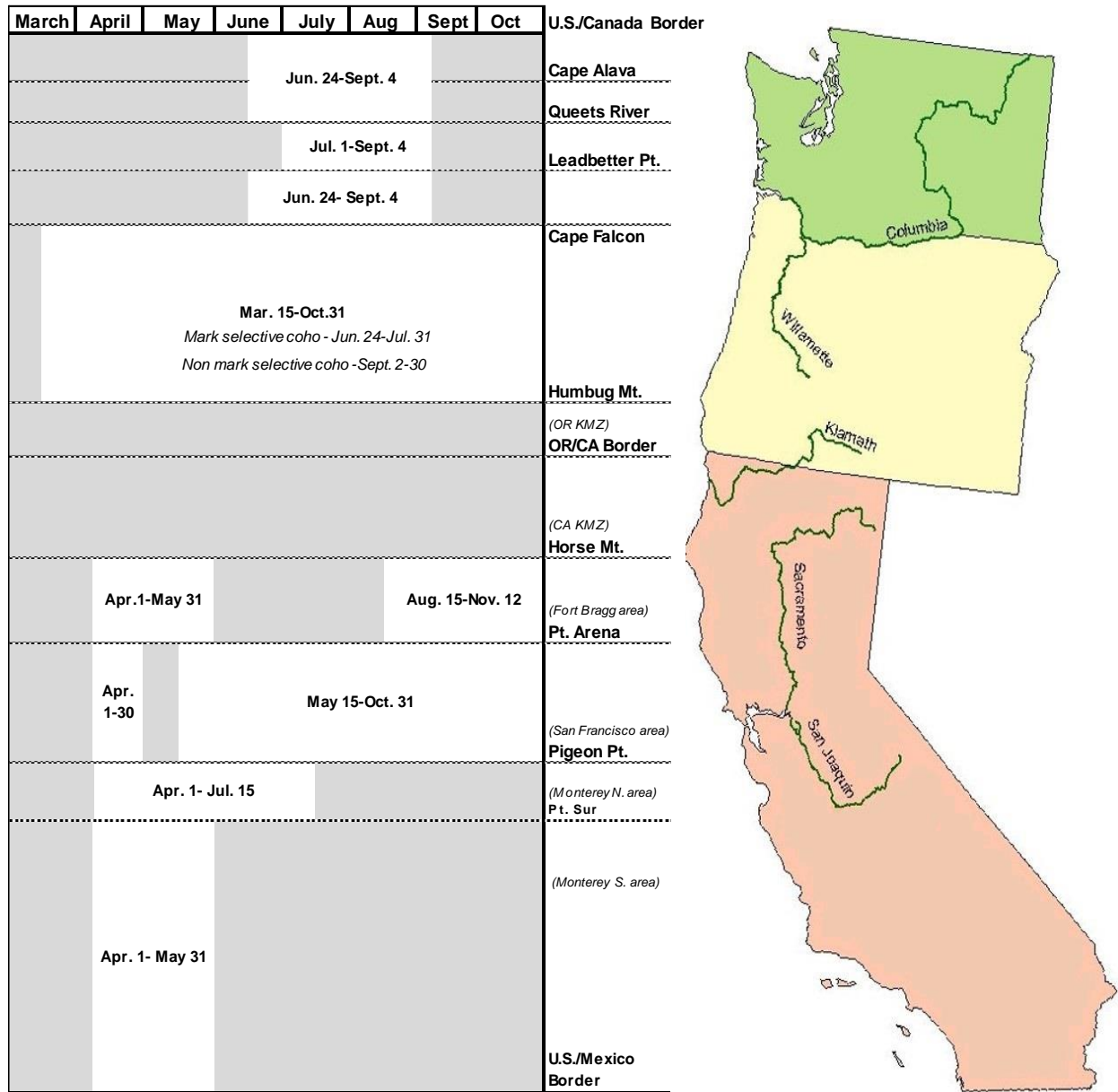


FIGURE 2. Council-adopted recreational salmon seasons for 2017.

TABLE 3. 2017 Treaty Indian ocean troll management measures for ocean salmon fisheries - Council adopted.  
(Page 1 of 1)

<b>A. SEASON DESCRIPTIONS</b>
<b>Supplemental Management Information</b>
1. Overall Treaty-Indian TAC: 40,000 Chinook and 12,500 coho.
<ul style="list-style-type: none"> <li>• May 1 through the earlier of June 30 or 20,000 Chinook quota. All salmon except coho. If the Chinook quota for the May-June fishery is not fully utilized, the excess fish may be transferred into the later all-salmon season (C.5.a). 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).</li> <li>• July 1 through the earlier of September 15, or 20,000 Chinook quota (C.5), or 12,500 coho quota. All Salmon. See size limit (B) and other restrictions (C).</li> </ul>

**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°10'00" N. lat. (Cape Alava.) 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°08'30" 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 2004-2015. Fish taken during this fishery are to be counted against treaty troll quotas established for the 2017 season (estimated harvest during the September-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 2017 ocean salmon fishery management measures - Council adopted.

Fishery or Quota Designation	Chinook	Coho
<b>NORTH OF CAPE FALCON</b>		
TREATY INDIAN OCEAN TROLL <sup>a/</sup>		
U.S./Canada Border to Cape Falcon (All Except Coho)	20,000	-
U.S./Canada Border to Cape Falcon (All Species)	20,000	12,500
Subtotal Treaty Indian Ocean Troll	40,000	12,500
NON-INDIAN COMMERCIAL TROLL <sup>b/</sup>		
U.S./Canada Border to Cape Falcon (All Except Coho)	27,000	-
U.S./Canada Border to Cape Falcon (All Species)	18,000	5,600
Subtotal Non-Indian Commercial Troll	45,000	5,600
RECREATIONAL		
U.S./Canada Border to Cape Alava <sup>b/</sup>	7,900	4,370
Cape Alava to Queets River <sup>b/</sup>	2,500	1,090
Queets River to Leadbetter Pt. <sup>b/</sup>	21,400	15,540
Leadbetter Pt. to Cape Falcon <sup>b/c/</sup>	13,200	21,000
Subtotal Recreational	45,000	42,000
TOTAL NORTH OF CAPE FALCON	130,000	60,100
<b>SOUTH OF CAPE FALCON</b>		
COMMERCIAL TROLL <sup>a/</sup>		
Humbug Mt. to OR/CA Border	-	-
OR/CA Border to Humboldt South Jetty	-	-
Horse Mt. to Pt. Arena	3,000	-
Subtotal Troll	3,000	-
RECREATIONAL		
Cape Falcon to OR/CA Border	-	24,000 <sup>d/</sup>
TOTAL SOUTH OF CAPE FALCON	3,000	24,000

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/ Does not include Buoy 10 fishery. Expected catch of 22,100 Chinook and 15,000 marked coho.

d/ The quota consists of both mark-selective and non-mark-selective quotas of 18,000 and 6,000, respectively.



TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2017 ocean salmon fishery management measures - Council adopted.<sup>a/</sup> (Page 1 of 4)

Key Stock/Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>		
<b>CHINOOK</b>			
<u>PUGET SOUND:</u>			
Elw ha Summer/Fall	6.30%	≤ 10.0%	Southern U.S. Rebuilding Exploitation Rate (NMFS ESA consultation standard)
Dungeness Spring	6.00%	≤ 6.0%	Southern U.S. CERC (NMFS ESA consultation standard)
Mid-Hood Canal Summer/Fall	11.1%	≤ 12.0%	Preterminal Southern U.S.(NMFS ESA consultation standard)
Skokomish Summer/Fall	47.5%	≤ 50.0%	Total Rebuilding Exploitation Rate (NMFS ESA consultation standard)
Nooksack Spring	10.0%	≤ 10.0%	Southern U.S. CERC, not to exceed in four out of five years (NMFS ESA consultation standard)
	32.0%	≤ 60.0%	ISBM Index (PSC General Obligation) compliance assessed postseason
Skagit Summer/Fall	36.3%	≤ 50.0%	Total Rebuilding Exploitation Rate (NMFS ESA consultation standard)
	59.0%	≤ 60.0%	ISBM Index (PSC General Obligation) compliance assessed postseason
Skagit Spring	22.9%	≤ 38.0%	Total Rebuilding Exploitation Rate (NMFS ESA consultation standard)
	57.0%	≤ 60.0%	ISBM Index (PSC General Obligation) compliance assessed postseason
Stillaguamish Summer/Fall	11.9%	≤ 15.0%	Southern U.S. Rebuilding Exploitation Rate (NMFS ESA consultation standard)
	30.0%	≤ 60.0%	ISBM Index (PSC General Obligation) compliance assessed postseason
Snohomish Summer/Fall	7.0%	≤ 15.0%	Southern U.S. Rebuilding Exploitation Rate (NMFS ESA consultation standard)
	16.0%	≤ 60.0%	ISBM Index (PSC General Obligation) compliance assessed postseason
Lake Washington Summer/Fall	20.0%	≤ 20.0%	Southern U.S. Rebuilding Exploitation Rate (NMFS ESA consultation standard)
	47.0%	≤ 60.0%	ISBM Index (PSC General Obligation) compliance assessed postseason
Green River Summer/Fall	9.9%	≤ 12.0%	Preterminal Southern U.S. CERC (NMFS ESA consultation standard)
	5.8	≥ 1.800	Natural spaw ning escapement (Low Abundance Threshold)
	59.0%	≤ 60.0%	ISBM Index (PSC General Obligation) compliance assessed postseason
White River Spring	17.7%	≤ 22.0%	Total Rebuilding Exploitation Rate (NMFS ESA consultation standard)
Puyallup Summer/Fall	49.5%	≤ 50.0%	Total Rebuilding Exploitation Rate (NMFS ESA consultation standard)
Nisqually River Summer/Fall	47.0%	≤ 47.0%	Total Rebuilding Exploitation Rate (NMFS ESA consultation standard)
<u>WASHINGTON COAST:</u>			
Hoko Fall	1.2	0.85	FMP MSY spaw ning escapement objective
	12.0%	≤ 60.0%	ISBM Index (PSC General Obligation) compliance assessed postseason
Quillayute Fall	>3.0	3.0	FMP MSY spaw ning escapement objective
	113.0%	≤ 60.0%	ISBM Index (PSC general obligation) not applicable because PSC escapement goal met
Hoh Fall	>1.2	1.2	FMP MSY spaw ning escapement objective
	66.0%	≤ 60.0%	ISBM Index (PSC general obligation) not applicable because PSC escapement goal met
Queets Fall	>2.5	2.5	FMP MSY spaw ning escapement objective
	63.0%	≤ 60.0%	ISBM Index (PSC general obligation) not applicable because PSC escapement goal met
Grays Harbor Fall	>13.5	13.5	FMP MSY spaw ning escapement objective
	66.0%	≤ 60.0%	ISBM Index (PSC general obligation) not applicable because PSC escapement goal met

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2017 ocean fishery management measures - Council adopted.<sup>a/</sup> (Page 2 of 4)

Key Stock/Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>	
<b>CHINOOK</b>		
<u>COLUMBIA RIVER:</u>		
Columbia Upriver Brights	275.1	74.0 Minimum ocean escapement to attain 40.0 adults over McNary Dam, with normal distribution and no mainstem harvest.
	104.0%	≤ 60.0% ISBM Index (PSC general obligation) not applicable because PSC escapement goal met
Deschutes Upriver Brights	97.0%	≤ 60.0% ISBM Index (PSC general obligation) not applicable because PSC escapement goal met
Mid-Columbia Brights	48.3	14.9 Minimum ocean escapement to attain 7.9 for Little White Salmon egg-take, assuming average conversion and no mainstem harvest.
Columbia Low er River Hatchery Tules <sup>e/</sup>	98.8	25.0 Minimum ocean escapement to attain 14.8 adults for hatchery egg-take, with average conversion and no low er river mainstem or tributary harvest.
Columbia Low er River Natural Tules (threatened)	36.9%	≤ 41.0% Total adult equivalent fishery exploitation rate (2017 NMFS ESA guidance). Value depicted uses preliminary 2017 inriver harvest rates.
Columbia Low er River Wild <sup>e/</sup> (threatened)	13.6	6.9 Minimum ocean escapement to attain MSY spaw ner goal of 5.7 for N. Lewis River fall Chinook (NMFS ESA consultation standard).
	106.0%	≤ 60.0% ISBM Index (PSC general obligation) not applicable because PSC escapement goal met
Spring Creek Hatchery Tules	164.4	8.2 Minimum ocean escapement to attain 6.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Snake River Fall (threatened) SRFI	48.0%	≤ 70.0% Of 1988-1993 base period exploitation rate for all ocean fisheries (NMFS ESA consultation standard).
Columbia Upriver Summers	64.8	29.0 Minimum ocean escapement to attain 12.1 adults over Rock Island Dam.
	150.0%	≤ 60.0% ISBM Index (PSC general obligation) not applicable because PSC escapement goal met
<u>OREGON COAST:</u>		
Nehalem Fall	142.0%	≤ 60.0% ISBM Index (PSC general obligation) not applicable because PSC escapement goal met
Siletz Fall	158.0%	≤ 60.0% ISBM Index (PSC general obligation) not applicable because PSC escapement goal met
Siuslaw Fall	138.0%	≤ 60.0% ISBM Index (PSC general obligation) not applicable because PSC escapement goal met

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2017 ocean fishery management measures - Council adopted.<sup>a/</sup> (Page 3 of 4)

Key Stock/Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>	
<b>CHINOOK</b>		
<b>CALIFORNIA:</b>		
Klamath River Fall	11.379	11.379 2017 minimum natural area adult escapement (FMP control rule).
Federally recognized tribal harvest	50.0%	50.0% Equals 0.8 (thousand) adult fish for Yurok and Hoopa Valley tribal fisheries.
Exploitation (spaw ner reduction) rate	8.1%	≤ 8.1% FMP control rule.
Adult river mouth return	18.4	NA Total adults in thousands.
Age-4 ocean harvest rate	3.1%	≤ 16.0% NMFS ESA consultation standard for threatened California Coastal Chinook.
KMZ sport fishery share	15.3%	NA Equals 0.1 (thousand) adult fish impacted in the KMZ sport fishery during fall (Sept-Dec) 2016.
River recreational fishery share	15.9%	NA Equals 0.1 (thousand) adult fish for recreational inriver fisheries.
Sacramento River Winter (endangered)	12.2%	≤ 15.8% Age-3 ocean impact rate in fisheries south of Pt. Arena. In addition, the following season restrictions apply: <u>Recreational</u> - Pt. Arena to Pigeon Pt. betw een the first Saturday in April and the second Sunday in November; Pigeon Pt. to the U.S./Mexico border betw een the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. <u>Commercial</u> - Pt. Arena to the U.S./Mexico border betw een May 1 and September 30, except Pt. Reyes to Pt. San Pedro betw een October 1 and 15 (Monday-Friday). Minimum size limit ≥ 26 inches total length (NMFS 2017 ESA Guidance).
Sacramento River Fall	133.2	≥ 122.0 2017 minimum hatchery and natural area adult escapement (FMP control rule).
Sacramento Index Exploitation Rate	42.2%	≤ 47.1% FMP control rule.
Ocean commercial impacts	50.4	Includes fall (Sept-Dec) 2016 impacts (8.6 thousand SRFC).
Ocean recreational impacts	25.4	Includes fall 2016 impacts (5.1 thousand SRFC).
River recreational impacts	21.7	NA Equals 22.3% of the total harvest.
Hatchery spaw ner goal	Met	22.0 Aggregate number of adults to achieve egg take goals at Coleman, Feather River, and Nimbus hatcheries.

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2017 ocean fishery management measures - Council adopted. <sup>a/</sup> (Page 4 of 4)

Key Stock/Criteria	Spaw ner Objective or Other Comparative Standard as Noted <sup>b/</sup>		
	COHO		
Interior Fraser (Thompson River)	7.6%(1.9%)	≤ 10.0%	2017 Southern U.S. exploitation rate ceiling; PSC coho agreement.
Skagit	11.1%(1.9%)	≤ 20.0%	2017 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Stillaguamish	8.5%(1.4%)	≤ 20.0%	2017 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Snohomish	15.2%(1.4%)	≤ 40.0%	2017 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Hood Canal	40.4%(2.1%)	≤ 65.0%	2017 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Strait of Juan de Fuca	4.9%(1.8%)	≤ 40.0%	2017 total exploitation rate ceiling; FMP matrix <sup>d/</sup>
Quillayute Fall	15.3	6.3	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Hoh	5.7	2.0	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Queets Wild	5.8	5.1	2017 Comanager adult spaw ner agreement. <sup>d/</sup> Value depicted is ocean escapement.
Grays Harbor	47.9	35.4	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Willapa Bay Natural	34.4	17.2	FMP MSY adult spaw ner estimate. Value depicted is ocean escapement.
Lower Columbia River Natural (threatened)	11.4%	≤ 18.0%	Total marine and mainstem Columbia R. fishery exploitation rate (2017 NMFS ESA guidance). Value depicted is ocean, Buoy 10, and Columbia R. mainstem using 2016 harvest rates.
Upper Columbia <sup>e/</sup>	79%	≥ 50%	Minimum percentage of the run to Bonneville Dam.
Columbia River Hatchery Early	183.1	77.2	Minimum ocean escapement to attain hatchery egg-take goal of 21.7 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Hatchery Late	119.7	9.7	Minimum ocean escapement to attain hatchery egg-take goal of 6.4 late adult coho, with average conversion and no mainstem or tributary fisheries.
Oregon Coastal Natural	9.3%	≤ 30.0%	Marine and freshwater fishery exploitation rate (NMFS ESA consultation standard).
Southern Oregon/Northern California Coast (threatened)	3.3%	≤ 13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).

a/ Reflects 2017 fisheries and abundance estimates.

b/ Ocean escapement is the number of salmon escaping ocean fisheries and entering freshwater with the following clarifications. Numbers in parentheses represent Council area exploitation rates. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. Exploitation rates for OCN coho include impacts of freshwater fisheries. 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. It is anticipated that fishery management will be adjusted by state and tribal comanagers during the preseason planning process to comply with stock management objectives.

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

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2017 ocean salmon fishery management measures - Council adopted. (Page 1 of 2)

Area and Fishery	Catch Projection	Bycatch Mortality <sup>a/</sup> Projection	Bycatch Projection <sup>b/</sup>	Observed in 2016	
				Catch	Bycatch Mortality
<b>CHINOOK (thousands of fish)</b>					
<b>OCEAN FISHERIES:</b>					
<b>NORTH OF CAPE FALCON</b>					
Treaty Indian Ocean Troll	40.0	4.1	10.3	22.8	2.3
Non-Indian Commercial Troll	45.0	23.5	85.5	19.4	9.3
Recreational	45.0	7.6	40.4	17.9	3.4
<b>CAPE FALCON TO HUMBUG MT.<sup>c/</sup></b>					
Commercial Troll	29.1	5.4	14.9	39.8	5.9
Recreational	6.0	0.4	0.7	2.6	0.3
<b>HUMBUG MT. TO OR/CA BORDER<sup>c/</sup></b>					
Commercial Troll	0.3	0.1	0.2	0.4	0.5 <sup>d/</sup>
Recreational	0.7	0.0	0.1	0.5	0.0 <sup>d/</sup>
<b>OR/CA BORDER TO HORSE MT.</b>					
Commercial Troll	0.0	0.0	0.0	0.2	0.2 <sup>d/</sup>
Recreational	0.0	0.0	0.0	5.0	0.4 <sup>d/</sup>
<b>HORSE MT. TO PT. ARENA</b>					
Commercial Troll	3.0	0.6	1.5	15.4	4.0 <sup>d/</sup>
Recreational	1.7	0.1	0.2	5.0	0.4 <sup>d/</sup>
<b>PT. ARENA TO PIGEON PT.</b>					
Commercial Troll	19.4	3.6	9.9	26.3	4.9 <sup>d/</sup>
Recreational	26.4	1.7	3.1	26.3	1.6 <sup>d/</sup>
<b>SOUTH OF PIGEON PT.</b>					
Commercial Troll	25.1	4.7	12.8	13.2	1.1 <sup>d/</sup>
Recreational	6.9	0.4	0.8	1.3	0.1 <sup>d/</sup>
<b>TOTAL OCEAN FISHERIES</b>					
Commercial Troll	161.9	42.0	135.1	137.5	28.2
Recreational	86.7	10.2	45.3	58.6	6.2
<b>INSIDE FISHERIES:</b>					
Area 4B	-	-	-	-	-
Buoy 10	21.7	0.4	2.0	17.8	1.5 <sup>d/</sup>

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2017 ocean salmon fishery management measures adopted by the Council. (Page 2 of 2)

Area and Fishery	Catch Projection	Bycatch Mortality <sup>a/</sup> Projection	Bycatch Projection <sup>b/</sup>	Observed in 2016	
				Catch	Bycatch Mortality
<b>OCEAN FISHERIES:</b>					
<b>COHO (thousands of fish)</b>					
<b>NORTH OF CAPE FALCON</b>					
Treaty Indian Ocean Troll	12.5	1.5	4.2	-	0.4
Non-Indian Commercial Troll	5.6	6.1	22.2	-	3.8
Recreational	42.0	7.4	31.4	18.7	11.6
<b>SOUTH OF CAPE FALCON</b>					
Commercial Troll	-	5.2	20.0	-	2.8
Recreational <sup>e/</sup>	24.0	7.1	35.9	5.7	2.3
<b>TOTAL OCEAN FISHERIES</b>					
Commercial Troll	18.1	12.9	46.5	-	7.0
Recreational	66.0	14.5	67.3	24.4	14.0
<b>INSIDE FISHERIES:</b>					
Area 4B	-	-	-	-	-
Buoy 10	15.0	2.5	9.1	9.2	1.3 <sup>d/</sup>

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: 15% (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 2017 ocean salmon fisheries - Council adopted.

Fishery	Exploitation Rate (Percent)			
	LCN Coho	OCN Coho	RK Coho	LCR Tule
SOUTHEAST ALASKA	0.0%	0.0%	0.0%	2.1%
BRITISH COLUMBIA	0.1%	0.4%	0.3%	12.8%
PUGET SOUND/STRAIT/BAY	0.1%	0.0%	0.0%	0.2%
NORTH OF CAPE FALCON				
Treaty Indian Ocean Troll	0.9%	0.2%	0.0%	1.8%
Recreational	2.9%	0.5%	0.0%	4.5%
Non-Indian Troll	1.3%	0.2%	0.0%	5.2%
SOUTH OF CAPE FALCON				
Recreational:				0.1%
Cape Falcon to Humbug Mt.	1.8%	5.0%	0.3%	
Humbug Mt. to OR/CA border (KMZ)	0.0%	0.0%	0.0%	
OR/CA border to Horse Mt. (KMZ)	0.0%	0.0%	0.0%	
Fort Bragg	0.0%	0.1%	1.1%	
South of Pt. Arena	0.0%	0.4%	1.1%	
Troll:				1.1%
Cape Falcon to Humbug Mt.	0.6%	0.5%	0.0%	
Humbug Mt. OR/CA border (KMZ)	0.0%	0.0%	0.0%	
OR/CA border to Horse Mt. (KMZ)	0.0%	0.0%	0.0%	
Fort Bragg	0.0%	0.0%	0.2%	
South of Pt. Arena	0.1%	0.5%	0.2%	
BUOY 10	0.9%	0.1%	0.0%	9.1%
ESTUARY/FRESHWATER	2.7%	1.4% <sup>a/</sup>	0.2% <sup>a/</sup>	
TOTAL	11.4%	9.3%	3.5%	36.9%

a/ Includes adult mortalities associated with PSC funded Chinook escapement monitoring studies in Oregon.

TABLE 8. 2017 projected coho mark rates for mark-selective fisheries under Council adopted management measures (percent marked).

Area	Fishery	June	July	August	September
<b>Canada</b>					
Johnstone Strait	Recreational	-	51%	56%	-
West Coast Vancouver Island	Recreational	42%	57%	60%	66%
North Georgia Strait	Recreational	59%	60%	60%	57%
South Georgia Strait	Recreational	34%	57%	45%	52%
Juan de Fuca Strait	Recreational	50%	49%	49%	52%
Johnstone Strait	Troll	69%	60%	54%	63%
NW Vancouver Island	Troll	51%	49%	50%	35%
SW Vancouver Island	Troll	54%	51%	51%	49%
Georgia Strait	Troll	65%	62%	62%	54%
<b>Puget Sound</b>					
Strait of Juan de Fuca (Area 5)	Recreational	55%	49%	48%	47%
Strait of Juan de Fuca (Area 6)	Recreational	54%	46%	45%	46%
San Juan Island (Area 7)	Recreational	59%	54%	60%	47%
North Puget Sound (Areas 6 & 7A)	Net	-	39%	56%	53%
<b>Council Area</b>					
Neah Bay (Area 4/4B)	Recreational	49%	55%	51%	58%
LaPush (Area 3)	Recreational	67%	57%	62%	45%
Westport (Area 2)	Recreational	67%	65%	64%	62%
Columbia River (Area 1)	Recreational	75%	74%	70%	72%
Tillamook	Recreational	67%	62%	57%	46%
New port	Recreational	62%	58%	55%	42%
Coos Bay	Recreational	54%	50%	40%	25%
Brookings	Recreational	48%	36%	33%	13%
Neah Bay (Area 4/4B)	Troll	53%	52%	53%	56%
LaPush (Area 3)	Troll	51%	56%	53%	56%
Westport (Area 2)	Troll	53%	59%	63%	59%
Columbia River (Area 1)	Troll	69%	68%	66%	65%
Tillamook	Troll	61%	60%	61%	57%
New port	Troll	60%	58%	55%	54%
Coos Bay	Troll	53%	51%	45%	31%
Brookings	Troll	41%	43%	46%	60%
<b>Columbia River</b>					
Buoy 10	Recreational	-	-	-	70%



TABLE 9. Preliminary projected exvessel value by catch area under Council-adopted 2017 non-Indian commercial troll management measures compared with 2016 and the 2012-2016 average (inflation-adjusted 2016 dollars).

Management Area	Exvessel Value (thousands of dollars) <sup>a/</sup>				
	2017 Projected <sup>b/</sup>	2016	2012-2016 Average	Percent Change	
				From 2016 (Modeled)	From 2012-2016 Average
North of Cape Falcon	4,222	1,797	3,273	+135%	+29%
Cape Falcon to Humbug Mt.	2,697	4,033	6,769	-33%	-60%
Humbug Mt. to OR/CA Border (OR KMZ)	28	41	479	-32%	-94%
OR/CA Border to Horse Mt. (CA KMZ)	0	19	214	-100%	-100%
Horse Mt. to Pt. Arena (Fort Bragg)	278	1,477	4,538	-81%	-94%
Pt. Arena to Pigeon Pt. (SF)	1,798	2,583	6,452	-30%	-72%
South of Pigeon Pt. (MO)	2,327	1,221	1,904	+91%	+22%
Total South of Cape Falcon	7,128	9,374	20,355	-24%	-65%
West Coast Total	11,351	11,171	23,628	+2%	-52%

a/ Exvessel value estimates are not comparable to the community income impacts shown in Table 10.

b/ 2017 projections are based on expected catches in the Council management areas, 2016 exvessel prices and 2016 average weight per fish.

TABLE 10. Preliminary projected angler trips and associated state level personal income impacts under Council-adopted 2017 recreational ocean salmon fishery management measures compared to estimated 2016 and the 2012-2016 average.

Management Area	Coastal Community Income Impacts <sup>a/</sup>							
	Angler Trips (thousands)			(thousands of dollars) <sup>b/</sup>			Percent Change in Income Impacts	
	2017 Projected	2016	2012-2016 Avg.	2017 Projected	2016	2012-2016 Avg.	Compared to 2016	Compared to 2012-2016 Avg.
North of Cape Falcon	77.6	52.0	88.1	13,845	9,270	16,889	+49%	-18%
Cape Falcon to Humbug Mt.	59.7	30.3	54.8	5,055	2,571	5,231	+97%	-3%
Humbug Mt. to OR/CA Border (OR KMZ)	3.8	4.2	13.8	551	344	1,194	+60%	-54%
OR/CA Border to Horse Mt. (CA KMZ)	0.0	9.0	19.9	0	1,585	3,516	-100%	-100%
Horse Mt. to Pt. Arena (Fort Bragg)	6.0	9.6	14.2	1,208	1,919	3,034	-37%	-60%
Pt. Arena to Pigeon Pt. (SF)	63.3	43.4	54.2	18,744	13,805	17,745	+36%	+6%
South of Pigeon Pt. (MO)	31.8	7.8	25.1	9,422	1,340	4,718	+603%	+100%
Total South of Cape Falcon	164.5	104.2	182.0	34,980	21,564	35,438	+62%	-1%
West Coast Total	242.2	156.2	270.1	48,825	30,835	52,327	+58%	-7%

a/ Income impacts are not comparable to exvessel values shown in Table 9.

b/ Dollar amounts are in inflation-adjusted 2016 values.

TABLE 11. Environmental effects of the Proposed Action relative to criteria and Alternatives analyzed in Preseason Reports I and II.<sup>a/</sup> (Page 1 of 2)

Environmental Component	No-Action Alternative <sup>b/</sup>	Alternative			Proposed Action		2017 Criteria or Comparison
		I	II	III			
<b>Chinook</b>							
KRFC Spawning Escapement	<b>9,397</b>	11,379	11,393	12,144	11,379	≥ 11,379	(FMP control rule).
Exploitation (spawner reduction) rate	<b>24.1%</b>	8.1%	8.0%	1.9%	8.1%	≤ 8.1%	FMP control rule.
SRFC Spawning Escapement	<b>116,439</b>	133,242	140,481	182,309	133,242	≥ 122,000	escapement (FMP control rule).
Exploitation Rate	<b>49.5%</b>	42.2%	39.1%	21.0%	42.2%	≤ 47.1%	FMP control rule.
<b>Canadian Stocks</b>							
Interior Fraser Coho	3.1%	7.6% (5.1%)	5.6% (3.1%)	4.4% (1.9%)	7.6% (1.9%)	≤ 10.0%	2017 Southern U.S. exploitation rate ceiling; PSC coho agreement.
<b>Puget Sound Coho</b>							
Skagit	5.8%	10.2% (4.8%)	8.4% (2.9%)	7.3% (1.9%)	11.1% (1.9%)	≤ 20.0%	2017 total exploitation rate ceiling; FMP matrix <sup>c/d/</sup>
Stillaguamish	7.7%	10.4% (3.4%)	9.2% (2.0%)	8.5% (1.3%)	8.5% (1.4%)	≤ 20.0%	2017 total exploitation rate ceiling; FMP matrix <sup>c/d/</sup>
Snohomish	7.1%	9.9% (3.4%)	8.6% (2.1%)	7.9% (1.3%)	15.2% (1.4%)	≤ 40.0%	2017 total exploitation rate ceiling; FMP matrix <sup>c/d/</sup>
Hood Canal	34.4%	36.9% (5.0%)	35.6% (3.1%)	34.9% (2.1%)	40.4% (2.1%)	≤ 65.0%	2017 total exploitation rate ceiling; FMP matrix <sup>c/d/</sup>
Strait of Juan de Fuca	4.1%	7.2% (4.3%)	5.2% (2.4%)	4.3% (1.5%)	4.9% (1.8%)	≤ 40.0%	2017 total exploitation rate ceiling; FMP matrix <sup>c/d/</sup>
<b>Washington Coastal Coho (in thousands of fish)</b>							
Quillayute Fall Coho	15.4	14.9	15.2	15.4	15.3	6.3	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
Hoh Coho	5.5	5.3	5.6	5.7	5.7	2.0	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
Queets Wild Coho	6.0	<b>5.5</b>	<b>5.7</b>	5.9	5.8	5.1	2017 Comanager adult spawner agreement. <sup>c/</sup> Value depicted is ocean escapement.
Grays Harbor Coho	NA	46.3	47.4	48.1	47.9	35.4	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
Willapa Bay Natural Coho	<b>24.8</b>	33.1	34.3	35.1	34.4	17.2	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
<b>ESA-Listed Salmon</b>							
California Coastal Chinook	9.0%	3.1%	3.2%	1.0%	3.1%	≤ 16.0%	KRFC age-4 ocean harvest rate.
SRWC	11.6%	12.2%	10.0%	1.2%	12.2%	≤ 15.8%	SRWC age-3 ocean impact rate in fisheries south of Pt. Arena.
LCR Natural Tule Chinook	NA	<b>41.3%</b>	39.9%	38.3%	36.9%	≤ 41.0%	Total adult equivalent fishery exploitation rate.
LCN Coho <sup>e/</sup>	12.4%	<b>12.6%</b>	8.4%	5.1%	11.4%	≤ 18.0%	Total marine and mainstem Columbia fishery exploitation rate.
OCN coho <sup>e/</sup>	15.0%	11.7%	5.3%	1.5%	9.3%	≤ 30.0%	Marine and freshwater fishery exploitation rate.
SONCC (RK) coho	9.9%	3.6%	3.4%	0.5%	3.3%	≤ 13.0%	Marine fishery exploitation rate.

TABLE 11. Environmental effects of the Proposed Action relative to criteria and Alternatives analyzed in Preseason Reports I and II.<sup>a/</sup> (Page 2 of 2)

Environmental Component	No-Action Alternative <sup>b/</sup>	Alternative			Proposed Action
		I	II	III	
<b>Socioeconomics</b>					
Commercial Community Personal Income Impacts (thousands of dollars)					
North of Cape Falcon	3,046	7,916	7,233	6,227	7,138
Cape Falcon to Humbug Mt.	5,590	4,146	2,120	146	4,139
Humbug to OR/CA border (OR KMZ)	165	150	89	33	146
OR/CA border to Horse Mt. (CA KMZ)	88				7
Horse Mt. to Pt. Arena (Fort Bragg)	2,315	295	48	-	476
Pt. Arena to Pigeon Pt. (San Francisco)	5,332	7,367	7,367	-	3,180
South of Pigeon Pt. (Monterey)	1,191				4,194
West Coast Total	17,727	19,875	16,858	6,406	19,281
Recreational Community Personal Income Impacts (thousands of dollars)					
North of Cape Falcon	9,270	18,497	15,676	8,288	13,845
Cape Falcon to Humbug Mt.	2,571	5,055	5,804	26	5,055
Humbug to OR/CA border (OR KMZ)	344				551
OR/CA border to Horse Mt. (CA KMZ)	1,585	551	1,561	551	-
Horse Mt. to Pt. Arena (Fort Bragg)	1,919	1,208	1,354	211	1,208
Pt. Arena to Pigeon Pt. (San Francisco)	13,805	28,166	24,728	6,460	18,744
South of Pigeon Pt. (Monterey)	1,340				9,422
West Coast Total	30,835	53,477	49,123	15,536	48,825

a/ Impacts assumed when Alternatives were adopted in March may have changed due to updated information from the PSC, North of Falcon process, or other sources.

b/ Socioeconomic impacts under the No-Action Alternative are assumed equal to 2016 estimates.

c/ 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. Values in parentheses indicate impacts in Council-area fisheries.

d/ Includes projected impacts of inriver fisheries.

e/ Impact rates listed under Alternatives I-III on LCN coho and OCN coho represent marine impacts. It is anticipated that when combined with freshwater impacts, the exploitation rates will meet, but not exceed, NMFS guidance. Total exploitation rates are shown for the No-Action Alternative and the Proposed Action, including freshwater impacts.

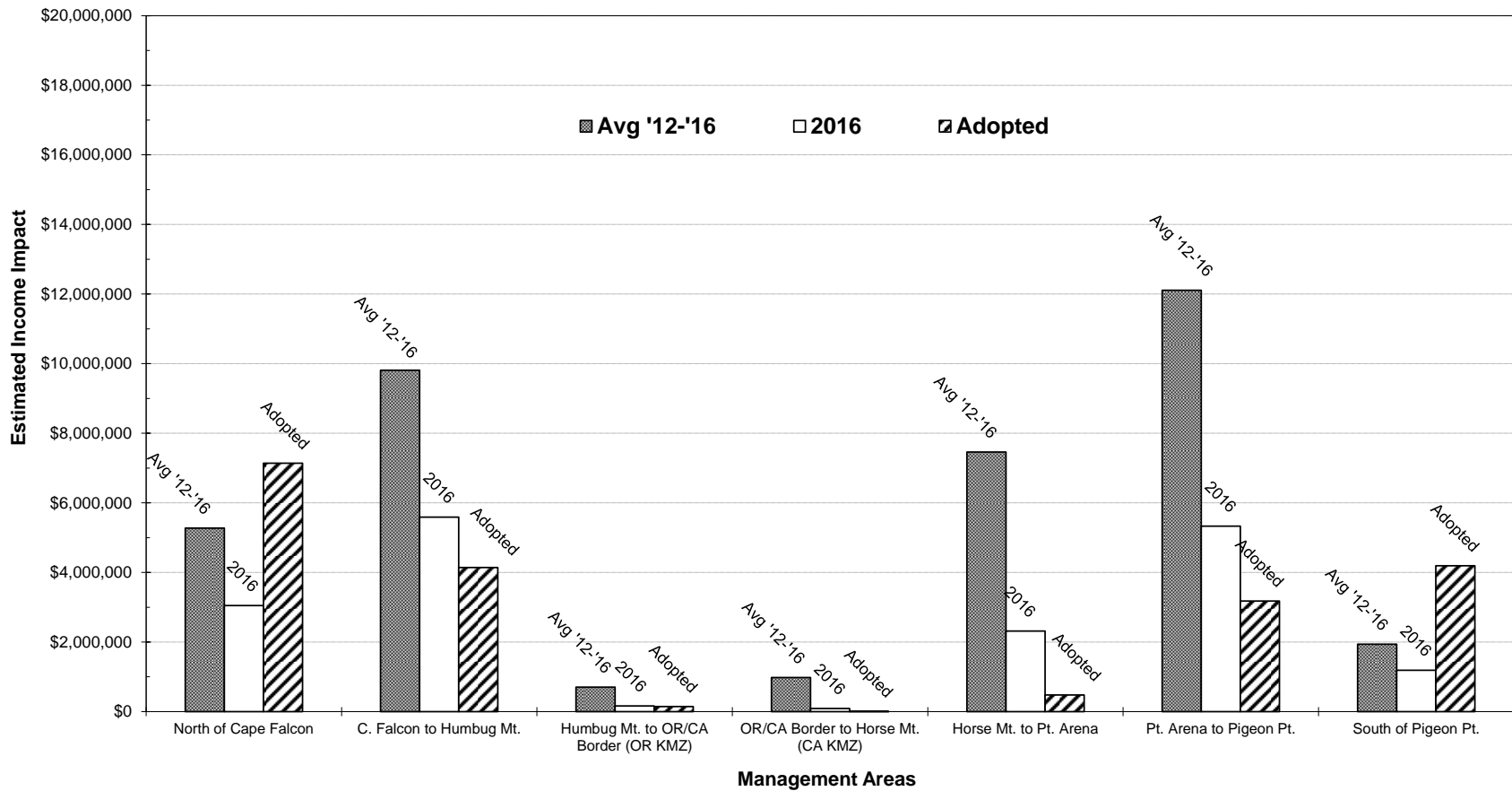


FIGURE 3. Projected coastal community personal income impacts associated with the 2017 commercial troll fishery under Council-adopted management measures compared to estimated 2016 and the 2012-2016 inflation-adjusted average (in 2016 dollars).

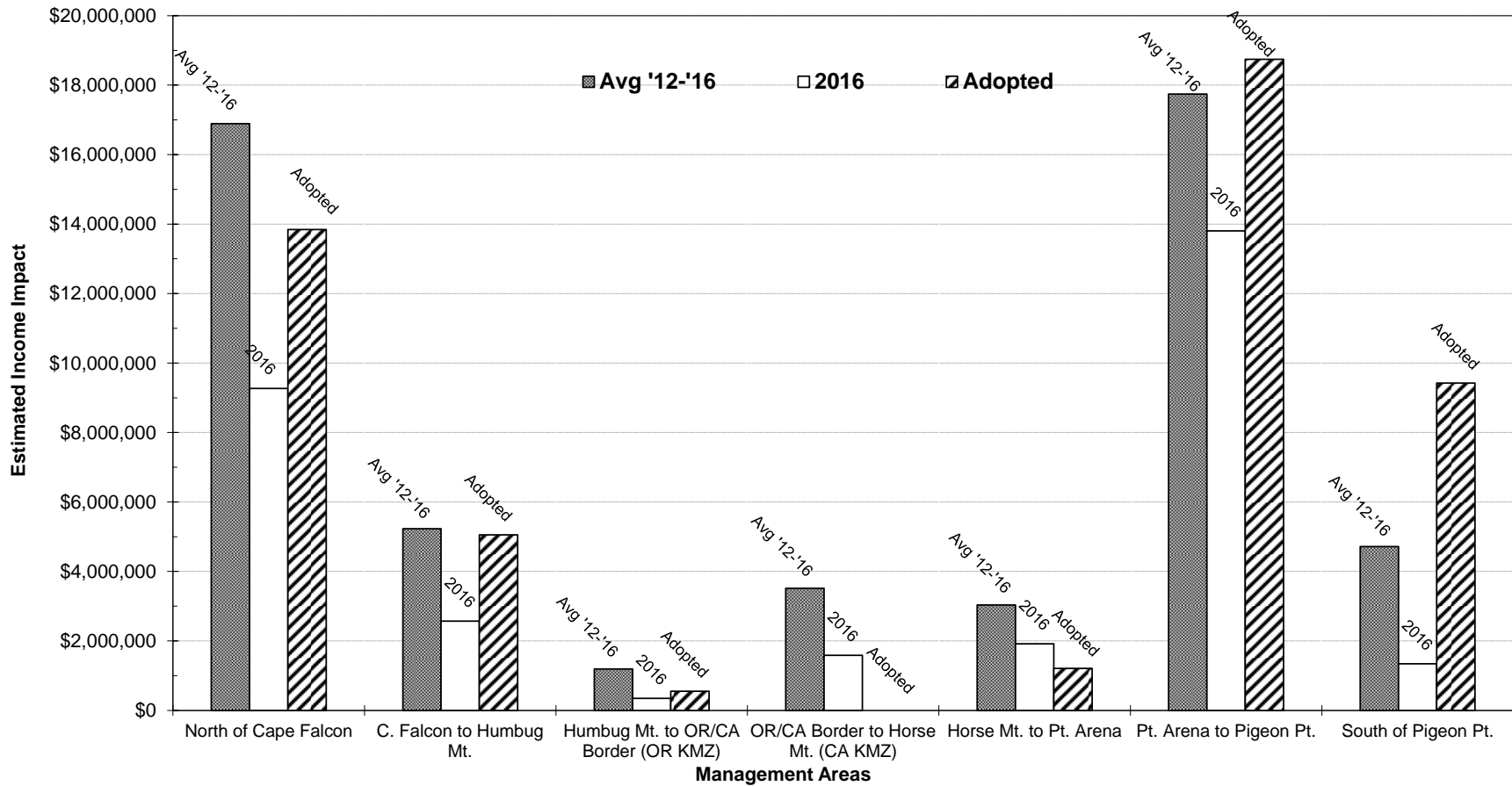


FIGURE 4. Projected coastal community personal income impacts associated with the 2017 recreational fishery under Council-adopted management measures compared to estimated 2016 and the 2012-2016 inflation-adjusted average (in 2016 dollars).

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This map is for reference only and is not intended for use in navigation or fishery regulation.