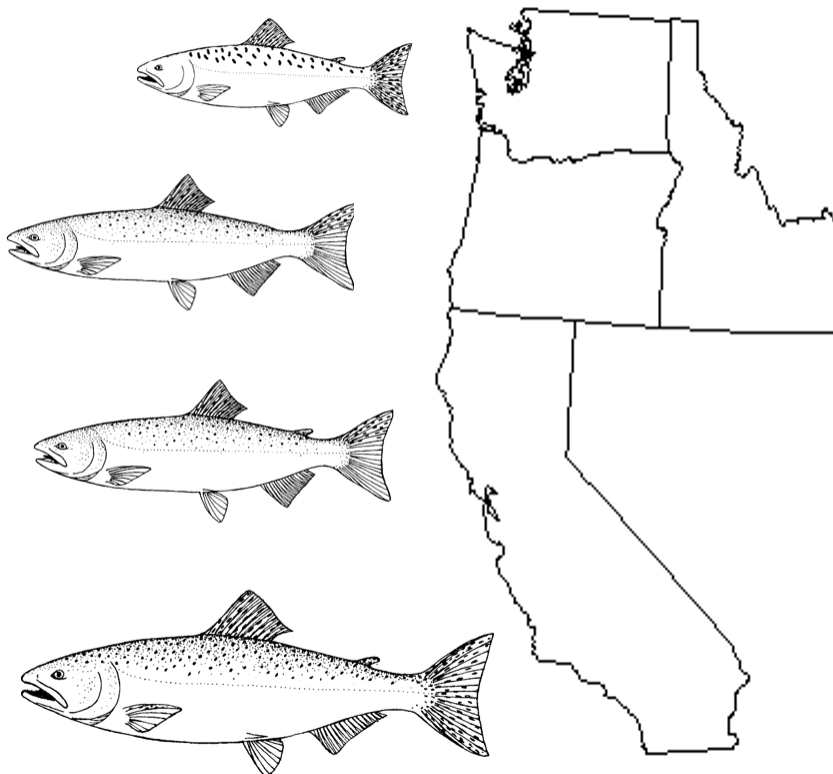


PRESEASON REPORT III
COUNCIL ADOPTED MANAGEMENT MEASURES
AND
ENVIRONMENTAL ASSESSMENT PART 3
FOR
2020 OCEAN SALMON FISHERY REGULATIONS
REGULATION IDENTIFIER NUMBER 0648-BJ48



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LIST OF ACRONYMS AND ABBREVIATIONS

AABM	Aggregate Abundance Based Management
ABC	Acceptable Biological Catch
ACL	Annual Catch Limit(s)
AI	Abundance Index
BO	biological opinion
CDFW	California Department of Fish and Wildlife
Council	Pacific Fishery Management Council
CPUE	catch per unit effort
CYER	Calendar year exploitation rate
EA	Environmental Assessment
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 (Humbug Mountain to Horse Mountain)
KRFC	Klamath River fall Chinook
LCN	Lower Columbia Natural (wild Columbia River coho below Bonneville Dam)
LCR	Lower Columbia River (wild Col. River tule fall Chinook below Bonneville Dam)
LRH	Lower River Hatchery (hatchery Col. River tule fall Chinook below Bonneville Dam)
LRW	Lower River Wild (Columbia River bright fall wild Chinook below Bonneville Dam).
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)
OFL	Overfishing Limit
OPI	Oregon Production Index
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RK	Rogue/Klamath (hatchery coho)
SAS	Salmon Advisory Subpanel
SCH	Spring Creek Hatchery (Col. R. tule fall Chinook returning to Spring Creek Hatchery [above Bonneville Dam])
SEAK	Southeast Alaska
SONCC	Southern Oregon/Northern California Coast (coho ESU)
SRFC	Sacramento River fall Chinook
SRFI	Snake River fall (Chinook) index
SRW	Snake River wild fall Chinook
SRWC	Sacramento River winter Chinook
STT	Salmon Technical Team
SWO	State Waters Only (fisheries off Oregon south of Cape Falcon)
TAC	Total Allowable Catch
WCVI	West Coast Vancouver Island
WDFW	Washington Department of Fish and Wildlife

1.0 INTRODUCTION

This is the last in an annual series of four reports prepared by the Salmon Technical Team (STT) of the Pacific Fishery Management Council (Council). The reports document and help guide salmon ocean fishery management off the coasts of Washington, Oregon, and California. This report describes the Council's 2020 ocean salmon management measures adopted for submission to the U.S. Secretary of Commerce, and characterizes the 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 2020 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) presented a statement of the purpose and need, a description of the affected environment, a description of 2020 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) 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 2020 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).

Under the Council's recommended salmon fisheries, salmon stocks originating from Washington, Oregon, and California meet all of the applicable conservation objectives in the FMP.

Sacramento River fall Chinook, Klamath River fall Chinook, Queets coho, Strait of Juan de Fuca coho, and Snohomish coho salmon stocks were classified as overfished in 2018, and the Council adopted rebuilding plans for all five stocks in 2019. In 2020, all stocks except Snohomish coho remain overfished; Snohomish coho meet the criteria for not overfished-rebuilding status.

2.0 SELECTION OF FINAL MANAGEMENT MEASURES .

The following figures and tables describe the Council-adopted management measures covering the period from May 6, 2020 through May 15, 2021 unless modified inseason:

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 assessment of stock status with regard to overfished, overfishing, and approaching an overfished condition is described in Table 12.

The 2020 seasons are constrained primarily by: (1) Klamath River Fall Chinook south of Cape Falcon, (2) Oregon coastal natural coho north of the OR/CA border, and (3) and lower Columbia River natural tule Chinook, Puget Sound Chinook, lower Columbia River natural coho, and Washington coastal coho 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 2020-2021 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 or postponing Oregon recreational and commercial fisheries scheduled to open March 15, 2021, if necessary to meet 2021 management objectives.
8. Closing or postponing California recreational fisheries scheduled to open April 3 or May 1, 2021, or commercial fisheries scheduled to open April 15, 2021, if necessary to meet 2021 management objectives.
9. Closing or postponing commercial fisheries north of Cape Falcon scheduled to open May 1, 2021, if necessary to meet 2021 management objectives.
10. Adjustments to incidental Pacific halibut catch regulations in commercial fisheries, including landing and possession ratios and landing and possession limits per trip.
11. Closing or postponing fisheries, or extending California Klamath Management Zone recreational fisheries due to federal (NMFS) or state actions relating to monitoring or access constraints stemming from the COVID-19 pandemic.

Inseason action will generally be accomplished through National Marine Fisheries Service (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 typically include commercial and recreational fisheries at the mouths of the Chetco, Elk, and other rivers, although none are planned for 2020. 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 2020.

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 Klamath River fall Chinook (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 2020 salmon management measures adopted by the Council meet all these allocation requirements.

4.0 SPECIES LISTED UNDER THE ENDANGERED SPECIES ACT

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

Species	ESU	Status	Most Recent		Original Listing	
Chinook						
Chinook Salmon (<i>O. tshawytscha</i>)	Sacramento River Winter	Endangered	83 FR 18233	4/26/2018	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
Chum						
Chum Salmon (<i>O. keta</i>)	Hood Canal Summer-Run	Threatened	76 FR 50448	8/15/2011	64 FR 14508	3/25/1999
	Columbia River	Threatened	76 FR 50448	8/15/2011	64 FR 14508	3/25/1999
Coho						
Coho Salmon (<i>O. kisutch</i>)	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
Sockeye						
Sockeye Salmon (<i>O. nerka</i>)	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)
4/26/2012	Lower Columbia River Chinook (until reinitiated)
4/9/2015	Lower Columbia River natural coho (until reinitiated)
4/26/2018	Sacramento River winter Chinook (until reinitiated)

Amendment 12 to the Salmon FMP added the generic category “species listed under the ESA” to the list of stocks in the salmon management unit and modified respective escapement goals to include “manage consistent with NMFS jeopardy standards or recovery plans to meet immediate conservation needs and long-term recovery of the species.” Amendment 14 specified those listed ESUs and clarified which stocks in the FMP management unit were representative of the ESUs.

In a letter received by the Council on February 28, 2020, NMFS provided guidance on protective measures for species listed under the ESA during the 2020 fishing season. The letter summarized the requirements of NMFS’ BOs on the effects of potential actions under the salmon FMP on listed salmon and provided the anticipated consultation standards of the BOs in preparation for the 2020 management season, as well as further guidance and recommendations for the 2020 management season. Additional guidance was provided during the April Council meeting.

The ESA consultation standards, exploitation rates, and other criteria in place for the 2020 management season are presented in Table 5. Some listed stocks are either rarely caught in Council area fisheries (e.g., spring Chinook from the upper Columbia River) or already receive sufficient protection from other salmon FMP and ESA standards (e.g., Central Valley spring Chinook). NMFS has determined that management actions designed to limit catch from these ESUs, beyond what will be provided by harvest constraints for other stocks, are not necessary.

Of the ESA-listed Chinook and coho, Council-managed fisheries have substantive impacts on Sacramento River winter Chinook (SRWC), Central Valley spring Chinook, California coastal Chinook, Snake River wild (SRW) fall Chinook, lower Columbia River (LCR) fall Chinook, and all of the coho stocks. Impacts to Puget Sound Chinook are relatively low in Council area ocean fisheries, but may be a constraining stock when structuring both ocean and inside fisheries during the North of Falcon process.

Additional listed salmonid ESUs found within the Council area, but not substantively impacted by Council managed fisheries, include:

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

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

A new ten-year agreement under the PST was adopted by both the U.S. and Canada and implemented beginning with the 2019 fishing year. The new agreement includes reductions to catch ceilings for Southeast Alaska (SEAK) and West Coast Vancouver Island (WCVI) aggregate abundance based management (AABM) fisheries relative to the prior 2009 agreement. For SEAK, the reductions range from 1.5 percent in years of high abundance to 7.5 percent in years of low abundance. For WCVI, the reductions range from 2.4 percent in years of high abundance to 12.5 percent in years of low abundance. Additionally, beginning with the 2019 agreement, while catch ceilings will continue to be determined using the Abundance Index(AI) from the PSC Chinook Model for Northern British Columbia and WCVI AABM fisheries, the allowable catches for SEAK fisheries will be set using a catch-per-unit-effort (CPUE) estimate from the early winter power troll fishery (see Tables 1 and 2 in Chapter 3 of the 2019 Agreement for specifics).

Fisheries not subject to AABM regimes, including Council-area fisheries, are subject to a new set of individual stock based management (ISBM) obligations under the 2019 agreement. These provisions require the calendar year exploitation rate (CYER) by all U.S. fisheries south of the U.S./Canada border on specific indicator stocks to be below some level of the average 2009 – 2015 CYER if they do not achieve their management objectives (see Attachment I in Chapter 3 of the 2019 Agreement for specifics). Similar to previous ISBM obligations, these limits are taken into account during preseason planning processes, however, relative to meeting the provisions of the PST, the CYER limits are evaluated on a postseason basis only. Canadian fisheries that are not included in AABM complexes are managed under ISBM constraints, which, similar to U.S. ISBM fisheries, require the CYER by Canadian ISBM fisheries on specific indicator stocks to be below some level of the average 2009 – 2015 CYER if they do not achieve their management objectives. Expectations for Canadian and Alaskan fisheries harvest and stock abundance forecasts are incorporated into the Chinook Fishery Regulation Assessment Model (FRAM) to estimate total exploitation rate impacts from all marine fisheries (Table 5).

Key considerations for Canadian domestic fishery management for Chinook in 2020 include: (1) meeting domestic conservation obligations for WCVI, Lower Strait of Georgia, Fraser River Spring 4.2 and 5.2, Fraser Summer 5.2, Fraser Summer 4.1 and Fraser Fall 4.1 (Harrison River) stocks; (2) meeting First Nations Food, Social and Ceremonial and treaty obligations for Chinook harvests in native fisheries; and (3) monitoring of incidental impacts during commercial and native fisheries directed at sockeye, and chum

salmon. It is anticipated that the details of the fishery regulatory package off WCVI and in the Juan de Fuca-Strait of Georgia areas will be driven by levels of allowable impact on WCVI, Lower Strait of Georgia and Fraser River Chinook stocks, in addition to Interior Fraser (Thompson River) coho, and potentially Thompson and/or Chilcotin River Steelhead (depending on a listing decision under Canada's Species at Risk Act). Increasing the availability of Chinook salmon in key foraging areas of Southern Resident Killer Whales in the southern BC region is an additional consideration which will be supported through conservation actions implemented for Fraser River and other Chinook salmon.

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 2019 PST Southern Coho Management Plan, and are based on total allowable fishery exploitation rates.

The categorical status of U.S. coho management units is reported to comply with obligations pursuant to the 2019 PST Southern Coho Management Plan. Categorical status is employed by the PSC under the 2019 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 2019 PST Southern Coho Management Plan uses the thresholds and stepped harvest rate goals from the Comprehensive Coho Agreement, developed by Washington and the Puget Sound tribes, and adopted by the Council as FMP conservation objectives in November 2009. Actual exploitation rate constraints for Canadian fisheries on U.S. coho management units are determined by formulas that specify sharing of allowable exploitation rates and a "composite rule." The composite rule adjusts constraints for Canadian fishery exploitation rates based on the number of U.S. management units which fall in a given category. For example, if only one Washington coastal or Puget Sound coho management unit is in low status, Canadian fisheries are constrained to a total exploitation rate on that unit of 12 percent; if two or more Washington coastal management units are in low status, the constraint becomes 10 percent. The most restrictive exploitation rate limit for Canadian fishery impacts on U.S. coho management units is 10 percent.

For several Washington coastal coho management units, management objectives are expressed as a range of spawning escapements expected to produce MSY. Using the forecast abundance, the exploitation rate necessary to achieve the lower end of the escapement range is calculated and used to classify the categorical status of the management units. If the management unit is in the low abundance status, exploitation rates up to 20 percent are allowed.

For 2020, Puget Sound and Washington coast coho constraints are as follows:

Status categories and constraints for Puget Sound and Washington Coast coho under the FMP and PST Southern Coho Management Plan.

FMP			
FMP Stock	Total Exploitation Rate Constraint ^{a/}	Categorical Status ^{a/}	
Skagit	35%	Low	
Stillaguamish	35%	Low	
Snohomish	20%	Critical	
Hood Canal	45%	Low	
Strait of Juan de Fuca	20%	Critical	
Quillayute Fall	59%		
Hoh	65%		
Queets	65%		
Grays Harbor	65%		

PST Southern Coho Management Plan

U.S. Management Unit	Total Exploitation Rate Constraint ^{b/}	Categorical Status ^{c/}	
Skagit	35%	Moderate	
Stillaguamish	35%	Moderate	
Snohomish	20%	Low	
Hood Canal	45%	Moderate	
Strait of Juan de Fuca	20%	Low	
Quillayute Fall ^{c/}	31%	Moderate	
Hoh ^{c/}	52%	Abundant	
Queets ^{c/}	26%	Moderate	
Grays Harbor	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 allowable rates for these stocks.

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

c/ Categories (Abundant, Moderate, Low) correspond to the general exploitation rate ranges depicted in paragraph 3(a) of the 2002 PST Southern Coho Management Plan. For Washington Coast stocks, categorical status is determined by the exploitation rate associated with meeting the escapement goal (or the lower end of the escapement goal range).

Key considerations for Canadian fishery management for coho in 2020 are expected to include: (1) meeting domestic conservation obligations for Interior Fraser (including Thompson River) coho; (2) coho harvests by First Nations fisheries; (3) incidental impacts during commercial and First Nations fisheries directed at pink, Chinook, sockeye, and chum salmon; and (4) the desire to provide increased opportunity for sport fisheries through mark-selective retention regulations. The Canadian fishery regimes affecting coho are expected to be driven by Canadian domestic allowable impacts on the Thompson River component of the Interior Fraser management unit.

In previous years prior to 2014, Canadian fisheries were managed so as not to exceed a three percent maximum exploitation rate. In May 2014, Canada decided to permit up to a 16% exploitation rate on upper Fraser coho in Canadian fisheries to allow for impacts in fisheries directed at a record Fraser sockeye forecast. Since 2015, upper Fraser coho in Canadian fisheries have been managed per low status limitations. The projected status of Canadian coho management units in 2020 indicates continuing concerns for the condition of Interior Fraser coho. The Interior Fraser coho management unit is anticipated to remain in low status, resulting in a requirement to constrain the total mortality fishery exploitation rate for 2020 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 2020 are:

- *Columbia River hatchery tules.* Combined production of Lower River Hatchery (LRH) and Spring Creek Hatchery (SCH) stocks returning to the Columbia River is forecasted to be 97,200, which is slightly lower than the 2019 preseason expectation of 100,500. The 2020 LRH forecast is 51,000, which is below the forecast of 54,500 in 2019. The 2020 SCH forecast is 46,200, which is similar to the 2019 forecast of 46,000.

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.
- Fisheries north of Cape Falcon were shaped to minimize impacts on LCR natural tule 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. Descriptions pertaining to the achievement of key objectives for Chinook salmon management north of Cape Falcon are as follows:

- *LCR natural tule fall Chinook.* The projected exploitation rate in the adopted management measures is 38.0 percent, and meets the 38.0 percent maximum for 2020.
- *LRW fall Chinook.* The adopted management measures have a projected ocean escapement of 19,200 adults, which is projected to be sufficient to meet the ESA consultation standard of an adult spawning escapement of at least 5,700 in the North Fork Lewis River.
- *SRW fall Chinook.* The adopted management measures have an ocean exploitation rate that is 51.3 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.
- *Puget Sound Chinook.* The State of Washington and the Puget Sound treaty tribes reached agreement on a package of fisheries to be modeled in concert with 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 February 27, 2020 letter from NMFS and supplemental NMFS guidance received during the April 2020 PFMC meeting, 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 2020 Chinook harvest management south of Cape Falcon are:

- *KRFC*. The ocean abundance forecast for this stock is 149,618 age-3, 36,241 age-4, and 739 age-5 fish. Last year's preseason forecast was 167,504 age-3, 106,119 age-4, and 599 age-5 fish.
- *SRFC*. The Sacramento Index forecast is 473,183, which is higher than last year's preseason forecast of 379,632.
- *SRWC*. The forecast of age-3 escapement absent fishing is 3,077, which is higher than last year's preseason forecast of 1,924.

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 36,206 adults, which is produced, in expectation, by a maximum exploitation rate of 25.0 percent (FMP control rule).
- A *SRFC* hatchery and natural area spawner escapement of at least 141,955 adults, which is produced, in expectation, by a maximum exploitation rate of 70.0 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.

For 2020, the Klamath River fall Chinook (*KRFC*) harvest control rule specifies a *de minimis* maximum allowable exploitation rate of 25.0 percent. The Salmon Fishery Management Plan (FMP) requires consideration of several factors when recommending *de minimis* exploitation rate. From page 31 of the FMP:

“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 2020 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 for minimal needs for tribal fisheries, which were not determined). The potential for critically low natural spawner abundance and substocks falling below crucial genetic thresholds is expected to be relatively low (18%), given the natural-area spawner projection of 36,206 produced by the 25.0 percent *de minimis* exploitation rate. The projected risk is lower under scenarios with lower exploitation rates. The forecast of natural-area spawners in the absence of additional fishing is 48,237, which is above the maximum sustainable yield spawner escapement (S_{MSY}). If fishing seasons are structured such that the maximum allowable exploitation rate of 25.0 percent is met, the natural-area adult spawner expectation is 36,206, which is greater than the Minimum Stock Size Threshold (MSST) but below S_{MSY} . The natural-area

spawner abundance has been lower than 36,206 in four of the last five years. With regard to co-mingled stocks, Sacramento River fall Chinook (SRFC) have a relatively large abundance forecast. The 2020 abundance forecast is the second largest over the past five years. Indicators of marine and freshwater conditions provided in the California Current Integrated Ecosystem Assessment (CCIEA) California Current Ecosystem Status Report for 2020 suggest a mixed assessment of marine conditions. Several ecological indicators implied average to above average productivity in 2019. However, there were also indicators of poor conditions, such as low krill densities in California and Oregon and low abundance of juvenile rockfish. With regard to freshwater conditions, the CCIEA report identifies snow-water equivalent values in northern California as above average as of February 1, 2020. The KRFC stock currently meets the criteria for being at risk of approaching an overfished condition. However, KRFC is currently overfished.

At the April 2020 PFMC meeting, it was agreed that the KRFC harvest control rule was being implemented as intended, which has led to the limited seasons south of Cape Falcon that employ restrictive time/area closures. These include closures for the commercial fishery in the California portion of the KMZ, and restricted seasons for the Fort Bragg commercial fishery and both the Oregon and California KMZ recreational fisheries.

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. Table 12 provides an assessment of stock status. Descriptions pertaining to the achievement of key objectives for Chinook salmon management south of Cape Falcon are found below.

- *KRFC*. The projected escapement is 36,206, which is equivalent to the 2020 control rule-defined minimum natural area adult spawners.
- *SRFC*. The adopted management measures have a projected escapement of 233,174, which exceeds the control rule-defined minimum of 141,955 hatchery and natural area adult spawners.
- *SRWC*. The adopted management measures result in a projected age-3 impact rate of 16.2 percent, which is consistent with the ESA consultation standard that (1) limits the age-3 impact rate in 2020 fisheries south of Point Arena to a maximum of 20.0 percent and (2) specifies time/area closures and minimum size limit constraints south of Point Arena.
- *California coastal Chinook*. The adopted management measures result in a projected KRFC age-4 ocean harvest rate of 8.8 percent, which is consistent with the consultation standard limiting the KRFC age-4 ocean harvest rate to a maximum of 16.0 percent.
- *LCR natural tule fall Chinook*. The projected exploitation rate in the adopted management measures is 38.0 percent, equivalent to the 38.0 percent maximum for 2020.
- *SRW fall Chinook*. The adopted management measures have an ocean exploitation rate of 51.3 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.

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:

- *Oregon Production Index (OPI) Hatchery coho.* The 2020 forecast for hatchery coho from the Columbia River and the coast south of Cape Falcon of 185,700 is substantially lower than the 2019 forecast of 933,500. The Columbia River early coho forecast is 130,700 compared to the 2019 forecast of 545,000, and the Columbia River late coho forecast is 50,300, compared to the 2019 forecast of 360,600.
- *Oregon Coastal Natural (OCN) coho.* The 2020 OCN forecast is 83,000 compared to the 2019 forecast of 76,100.
- *Lower Columbia Natural (LCN) coho.* The 2020 LCN forecast is 24,600 compared to the 2019 forecast of 36,900.
- *Puget Sound coho.* Among Puget Sound natural stocks, Strait of Juan de Fuca and Snohomish coho are in the critical category in 2020. Skagit, Stillaguamish, and Hood Canal coho are in the low category.
- *Interior Fraser (Thompson River) coho.* This Canadian stock continues to be depressed, but will not constrain ocean coho fisheries north of Cape Falcon in 2020.
- *Washington coastal wild coho.* Forecasts for most Washington coastal coho stocks in 2020 are lower than in 2019. Under the PST Southern Coho Management Plan, Hoh coho are in the abundant category, while Quillayute fall, Queets, and Grays Harbor coho are in the moderate category.

7.1 Objectives

Key coho management objectives shaping management measures in 2020 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. The maximum allowable exploitation rates for 2020 are: (1) a combined marine/freshwater exploitation rate not to exceed 15.0 percent for OCN coho, (2) a combined exploitation rate in marine-area and mainstem Columbia River fisheries not to exceed 18.0 percent for LCN coho, and (3) a marine exploitation rate not to exceed 13.0 percent for Rogue/Klamath hatchery coho, used as a surrogate for the SONCC coho ESU. Furthermore, coho retention is prohibited in all California ocean fisheries.
- 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. The forecasts for some Puget Sound coho stocks and for Interior Fraser coho in 2020 are low; however, the majority of the exploitation on these stocks occurs in Puget Sound and was addressed in development of fishing seasons for inside waters during the North of Falcon co-management process by the state and tribes. Because of their abundance status, Interior Fraser coho are subject to an exploitation rate ceiling of 10.0 percent in southern U.S. fisheries under the PST Southern Coho Management Plan.

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 Rogue/Klamath (RK) coho. Table 8 provides expected coho mark rates for west coast fisheries by month. Table 12 provides an assessment of stock status.

- *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 10.6 percent and a mainstem Columbia River exploitation rate of 6.3 percent.
- *OCN coho*. The adopted management measures satisfy the maximum 15.0 percent exploitation rate for combined marine and freshwater fisheries, with a marine exploitation rate of 10.2 percent and a freshwater exploitation rate of 1.4 percent.
- *Washington coastal wild coho*. The adopted management measures provide ocean escapement numbers of 8,700, 3,600, 6,700, and 47,100 for Quillayute fall, Hoh, Queets, and Grays Harbor natural coho respectively. These ocean escapement levels, when combined with scheduled in-river fisheries, meet FMP management objectives or objectives agreed to by WDFW and the treaty tribes for those coho stocks.
- *Interior Fraser coho*. The Southern U.S. exploitation rates in the adopted management measures total 7.4 percent, which complies with the 10.0 percent maximum required by the PST Southern Coho Management Plan.

The adopted management measures for coho fisheries satisfy NMFS ESA consultation standards and guidance, FMP objectives, and all other objectives for relevant coho stocks other than and including those listed in Table 5.

8.0 PINK SALMON MANAGEMENT

Pink salmon runs occur in odd-numbered years and were not an important management consideration in 2020.

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 were shaped to meet NMFS consultation standards and annual guidance for Chinook and coho stocks of concern. The 2020 Chinook total allowable catch (TAC) is similar to 2019 due to a slightly lower abundance of LCR natural tule Chinook and to help meet overall conservation objectives for Puget Sound Chinook. The 2020 coho TAC is decreased substantially relative to 2019 due to much lower abundance forecasts for Columbia River and coastal Washington coho stocks.

Fisheries south of Cape Falcon are primarily constrained by KRFC. The adopted management measures reflect FMP guidance to achieve, in expectation, a maximum allowable harvest rate of 25.0 percent or an escapement of 36,206 natural area spawners for KRFC under the *de minimis* regime of its harvest control rule.

9.1 Commercial

North of Cape Falcon, the non-Indian troll Chinook quota is split evenly between the spring (May-June) fishery and the summer fishery (July-September). A preseason trade of 2,560 coho from the commercial fishery allocation to the recreational fishery in exchange for 640 Chinook from the recreational allocation is in place. The non-Indian commercial Chinook quota of 27,640 is increased slightly compared to the 26,250 Chinook quota in 2019. The non-Indian commercial coho quota of 2,000 is substantially decreased relative to the 2019 quota of 30,400 coho.

The spring fishery in the area north of Cape Falcon will be open for all salmon except coho seven days per week May 6 through June 28. Chinook subarea guidelines and weekly (defined as Thursday through Wednesday) landing and possession limits are in effect in the area between the U.S./Canada border and the Queets River and in the area between Leadbetter Point and Cape Falcon. In 2021, the season is scheduled to open May 1 for all salmon except coho consistent with preseason regulations as described for this area and subareas for May 6-June 28, 2020.

The summer fishery in the area north of Cape Falcon will be open for all salmon seven days per week July 1 through September 30. A landing and possession limit of 10 marked coho per vessel per landing week is in effect coastwide, and all landed coho must be marked with a healed adipose fin clip.

For the Oregon coast between Cape Falcon and Humbug Mountain, Chinook fisheries will be open portions of April and May, and nearly all of June-October. Weekly landing and possession limits will be in place for September and October.

For the Oregon portion of the Klamath Management Zone (KMZ), from Humbug Mountain to the Oregon/California border, the season will be open for portions of April and May, followed by monthly quotas in June and July. The summer quota fisheries have weekly landing and possession limits. The California portion of the KMZ, from the Oregon/California border to Horse Mountain, will remain closed to commercial fishing for the entirety of the 2020 season.

The fishery from Horse Mountain to Point Arena, the Fort Bragg management area, will be open August 1-10 and for the month of September, with a minimum size limit of 27 inches.

The San Francisco management area, from Point Arena to Pigeon Point, will be open for two periods in May, totaling 21 days of fishing. For June, it will open and close on June 1 and 6, and again on June 14 and 30, totaling 23 days of fishing for the month. The area will again open on July 13 continuously through August 28. Thereafter it will be open for the month of September, and the Monday through Friday fall area target zone fishery between Point Reyes and Point San Pedro will occur during the first half of October. Minimum size limits will be 27 inches prior to September 1 and 26 inches thereafter.

Fisheries south of Pigeon Point, in the Monterey management area, will be open for 26 days in May (May 1-12, 18-31) and then have a season that conforms to that of the San Francisco management area for June through August, including a 27-inch size limit.

9.2 Recreational

The recreational fishery north of Cape Falcon will open seven days per week for all salmon except coho June 20 through June 28 in all areas with a one salmon daily bag limit. Beginning June 29, the fishery will open in all areas for all salmon and will continue through September 30, or when Chinook subarea guidelines or coho subarea quotas are attained. A preseason trade of 640 Chinook from the recreational fishery allocation to the commercial troll fishery in exchange for 2,560 coho from commercial fishery allocation to the recreational fishery is in place. The recreational Chinook quota of 26,360 is similar to the 2019 quota of 26,250 Chinook. The recreational coho quota of 26,500 is substantially decreased relative to the 2019 quota of 159,600 coho. All coho must be marked with a healed adipose fin clip.

Beginning June 29, the Neah Bay, La Push, and Columbia River subareas will open seven days per week, while the Westport subarea will open five days per week, Sunday through Thursday. Daily bag limits are two salmon, only one of which may be a Chinook in subareas south of the Queets River; in subareas north of the Queets River, up to two Chinook are allowed in the daily bag limit. During the period June 20 through September 30, the minimum size limit for Chinook is 22 inches in subareas south of the Queets River and 24 inches in subareas north of the Queets River.

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 beginning

on June 27 and a non-mark-selective coho quota beginning on September 4 in the area from Cape Falcon to Humbug Mountain.

For the Oregon KMZ, the season will run from Saturday, June 20 to Friday, August 7. In the California KMZ, the recreational season will run from Saturday June 6 to Sunday August 9. The minimum size limit will be 24 inches in the Oregon KMZ and 20 inches in the California KMZ. Note that if COVID-19-related inseason action further delays the recreational season along the California Coast, the California KMZ season may be extended into late August on an impact neutral basis (Table 2, C.5.f). During the April Council meeting, it was determined that three delayed opening scenarios (May 16, June 1, and June 16) for the California recreational fishery south of Horse Mountain allow the KMZ fishery to remain open until August 12, 15, and 29, respectively, without increasing impacts for stocks of concern (Appendix A).

The area from Horse Mountain to Pigeon Point, which includes the Fort Bragg and San Francisco management areas, will open on May 1 and run continuously through November 8. The minimum size limit will be 20 inches in both areas for the entire season.

South of Pigeon Point, in the Monterey management area, the season will be open from May 1 through October 4 with a 24-inch minimum size limit.

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 17,500 sub-quota. The summer fishery opens on July 1 and runs through September 15 with a sub-quota of 17,500 Chinook and 16,500 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 management area expressed in terms of estimated potential exvessel value. Table 10 shows projected recreational fishery 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 a reduction in income impacts associated with commercial or recreational fishing activity may not necessarily reflect a net loss, it is likely to indicate losses to businesses and individuals in communities that depend on that activity for livelihood, depending on the availability of substitute activities. Unless otherwise noted, the economic effects of the commercial and recreational fisheries summarized below are compared in terms of estimated community income impacts.

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 harvest or provide additional spawning escapement that contributes 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 3 are based on projected deliveries by landing area. Historically there has been a divergence between catch and deliveries (landings) associated with a particular area. The difference is due to salmon caught in certain management areas being delivered to ports in neighboring management areas. 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, 2019 data shows there were deliveries of salmon: (1) caught north of Cape Falcon to landing ports between Cape Falcon and Humbug Mountain, (2) caught between Cape Falcon and Humbug Mountain to landing ports in the Oregon KMZ region, (3) caught between Point Arena and Pigeon Point to landing ports in the Fort Bragg region, and (4) caught south of Pigeon Point to landing ports in the San Francisco region.

The expected harvest levels used to model commercial fishery impacts are taken from Table 6. Estimated total harvest 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 2019 was approximately 15 percent below the prior year and recent five-year average, while coastwide average Chinook exvessel prices in 2019 were 21 percent lower than the prior year and the lowest in inflation-adjusted terms since 2014. If this year’s actual average weight per fish or exvessel prices diverge significantly from what was observed last year, then salmon exvessel revenues and resulting commercial fisheries income impacts projected in this document may prove to be correspondingly biased.

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, as compared to last 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*.

Recreational fishery effort north of Cape Falcon was estimated using historical CPUE estimates (“success rates”) applied to expected harvest levels. Expected recreational harvest levels north of Cape Falcon were projected by multiplying the adopted quotas for the two species by historic ratios of actual catch to actual quotas. Effort was then estimated by multiplying expected recreational harvest levels by recent year weighted average coho and Chinook angler success rates and summing the results. Economic impacts were then calculated using average per trip estimates that considered historic ratios of charter and private vessel angling.

10.2 Community Impacts

Projected income impacts under the Proposed Action in coastal communities adjacent to commercial and recreational salmon fishery management areas are shown in Figure 3 and Figure 4, and comparisons of impacts under the Proposed Action with impacts under Alternatives I, II and III are summarized in Table 11.¹ Projected coastwide income impacts from commercial salmon landings and processing under the Proposed Action are near the top of the range analyzed under the Alternatives but approximately 32 percent lower than estimated total coastwide commercial fisheries income impacts last year (Figure 3 and Table 11). Regionally the picture is mixed, with income impacts from commercial salmon fisheries under the Proposed Action projected to be at least somewhat above last year's level in the three regions north of the Oregon/California border, but below last year's levels in all regions south of the Oregon/California border, including 100 percent lower in the California KMZ (Oregon/California Border to Horse Mountain). With respect to the 2015-2019 inflation-adjusted average, income impacts from commercial salmon fisheries under the Proposed Action are projected to be two percent lower overall coastwide, and below the 2015-2019 inflation-adjusted average in all regions north of Point Arena, but at least somewhat above the 2015-2019 inflation-adjusted average in both regions south of Point Arena (Figure 3 and Table 11).

Projected coastwide income impacts from expenditures by recreational salmon anglers under the Proposed Action are in the middle of the range analyzed under the Alternatives and overall are about 17 percent below the estimated total coastwide recreational fisheries income impacts from last year's activity (Table 11 and Figure 4). Regionally the picture is mixed, with recreational fisheries income impacts under the Proposed Action projected to be below last year's level north of Cape Falcon, from Cape Falcon to Humbug Mountain, and south of Pigeon Point, but at least somewhat above last year's level in all other regions. Compared with the 2015-2019 inflation-adjusted average, recreational fisheries income impacts under the Proposed Action are projected to be slightly lower overall coastwide, and lower north of Cape Falcon and in the Oregon KMZ (Humbug Mountain to the Oregon/California border), but above the 2015-2019 inflation-adjusted average in the other five regions (Figure 4 and Table 10, Table 11).

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. Bag limits allow a greater number of fishers to participate in the fishery. Minimum size limits remain consistent throughout the season in most areas, which, in addition to biological benefits, tend to increase regulatory compliance. Where size limits do change in-season, they decrease, such that anglers complying with earlier size limits will still be in compliance with the reduced limits. Efforts were made to accommodate important cultural events such as the Independence Day and Labor Day holidays as well as traditional fishing derby events.

¹ Income impacts for recreational fisheries under Alternatives I, II and III summarized in Table 11 may differ for certain regions from those shown in Table 10 and Figure 4 of Preseason Report II due to a change in the weighting factors applied; however the differences do not affect the overall coastwide totals under the Alternatives or inferences regarding the relative rankings of the Alternatives for each region.

Commercial fisheries often include vessel limits per trip or per open period in an effort to stretch quota attainment over a longer period of time. Doing so can provide greater access for smaller vessels, increase safety at sea by making it easier to avoid fishing in inclement weather, improve marketing opportunities, and extend the period during which consumers have access to fresh, wild caught salmon. Notification 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 similar opportunities for Chinook, but substantially reduced ocean coho opportunity, when compared with 2019 (Table 3 and Table 6). The Klamath River tribal share under the Proposed Action is 8,632 adult KRFC, a substantial decrease from the 2019 allocation of 32,401 adult KRFC. Note that as with the non-tribal commercial and recreational salmon fisheries described in section 10.1 Economic Impacts, restricting ocean salmon harvests may allow increased opportunities for inside harvest and escapement (and vice versa).

11.0 ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

The Proposed Action, adoption of the 2020 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 may fall outside the range of impacts under the Alternatives in Preseason Report II, such impacts result from the shaping of fisheries that occur outside of the Council area, 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 2019. Although not true for all regions, relative to No Action (as represented by the 2019 values) the Proposed Action would provide lower overall coastwide income impacts from both commercial and recreational 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. 2020 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 1 of 7)

A. SEASON DESCRIPTIONS
North of Cape Falcon
Supplemental Management Information
<p>1. Overall non-Indian TAC: 54,000 Chinook and 28,500 coho marked with a healed adipose fin clip (marked). 2. Non-Indian commercial troll TAC: 27,640 Chinook and 2,000 marked coho. 3. Trade: Commercial troll traded 2,560 marked coho to the recreational fishery for 640 Chinook.</p>
<p>Model run: Coho: 2032, Chinook: 3120</p>
<p>U.S./Canada Border to Cape Falcon</p> <ul style="list-style-type: none"> May 6 through the earlier of June 28, or 13,820 Chinook. No more than 5,100 of which may be caught in the area between the U.S./Canada border and the Queets River, and no more than 3,770 of which may be caught in the area between Leadbetter Pt. and Cape Falcon (C.8). <p>Open seven days per week (C.1). All salmon, except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p> <p>In the area between the U.S./Canada border and the Queets River, the landing and possession limit is 75 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>In the area between Leadbetter Pt. and Cape Falcon, the landing and possession limit is 75 Chinook per vessel per landing week (Thurs.-Wed.) (C.1, C.6).</p> <p>When it is projected that approximately 75% of the overall Chinook guideline has been landed, or approximately 75% of any of the individual Chinook subarea guidelines have been landed, inseason action will be considered to ensure the guideline is not exceeded.</p> <p>In 2021, the season will open May 1 for all salmon except coho consistent with preseason regulations as described for this area and subareas for May 6-June 28, 2020, including subarea salmon guidelines and weekly vessel limits. These regulations would apply from the opening of the fishery on May 1, 2021, until modified following Council review at its March and/or April 2021 meetings. Catch during this opening will be counted towards quotas set for this area and subareas at the April 2021 meeting.</p>
<p>U.S./Canada Border to Cape Falcon</p> <ul style="list-style-type: none"> July 1 through the earlier of September 30, or 13,820 Chinook or 2,000 coho (C.8). <p>Open seven days per week. All salmon. 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.e). 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).</p> <p>Landing and possession limit of 10 marked coho per vessel per landing week (Thurs.-Wed.) (C.1).</p>
<p>For all commercial troll fisheries north of Cape Falcon:</p> <p>Mandatory closed areas include: Salmon troll Yelloweye Rockfish Conservation Area, Cape Flattery, and Columbia Control Zones, and beginning August 10, the Grays Harbor Control Zone (C.5). Vessels must land and deliver their salmon within 24 hours of any closure of this fishery.</p> <p>Vessels fishing or in possession of salmon <u>north</u> of Leadbetter Point must land and deliver all species of fish in a Washington port and must possess a Washington troll and/or salmon delivery license. Vessels may not land fish east of the Sekiu River or east of the Megler-Astoria bridge. <u>For delivery to Washington ports south of Leadbetter Point</u>, vessels must notify the Washington Department of Fish and Wildlife at 360-249-1215 prior to crossing the Leadbetter Point line with area fished, total Chinook, coho, and halibut catch aboard, and destination with approximate time of delivery. During any single trip, only one side of the Leadbetter Point line may be fished (C.11).</p> <p>Vessels fishing or in possession of salmon while fishing <u>south</u> of Leadbetter Point must land and deliver all species of fish within the area and south of Leadbetter Point, except that Oregon permitted vessels may also land all species of 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 to 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 nfallcon.trollreport@state.or.us. Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8).</p> <p>Vessels in possession of salmon <u>north of the Queets River</u> may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho, and halibut catch aboard and destination. Vessels in possession of salmon <u>south of the Queets River</u> may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho, and halibut catch aboard, and destination (C.11).</p>

TABLE 1. 2020 Commercial troll management measures for non-Indian ocean salmon fisheries – Council adopted. (Page 2 of 7)

A. SEASON DESCRIPTIONS
South of Cape Falcon
Supplemental Management Information
<ol style="list-style-type: none"> 1. Sacramento River fall Chinook spawning escapement of 233,174 hatchery and natural area adults. 2. Sacramento Index exploitation rate of 50.7%. 3. Klamath River recreational fishery allocation: 1,296 adult Klamath River fall Chinook. 4. Klamath tribal allocation: 8,632 adult Klamath River fall Chinook. 5. CA/OR share of Klamath River fall Chinook commercial ocean harvest: 61% / 39%. 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.
<p>Cape Falcon to Humbug Mt.</p> <ul style="list-style-type: none"> • April 20-30; • May 1-5, 26-31; • June 4-30; • July 1-31; • August 1-25; • September 1-October 31 (C.8.g, C.9). <p>Open 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 salmon in the State of Oregon. See gear restrictions and definitions (C.2, C.3).</p> <p>Beginning September 1, no more than 75 Chinook allowed per vessel per landing week (Thurs.-Wed.).</p> <p>In 2021, the season will open March 15 for all salmon except coho. Chinook minimum size limit of 28 inches total length (B, C.1). Gear and other restrictions same as in 2020 (C.2, C.3, C.4). This opening could be modified following Council review at its March 2021 meetings (C.8).</p>
<p>Humbug Mt. to OR/CA Border (Oregon KMZ)</p> <ul style="list-style-type: none"> • April 20-30; • May 1-5, 26-31; • June 4 through the earlier of June 30, or a 700 Chinook quota; • July 1 through the earlier of July 31, or a 300 Chinook quota (C.8.g, C.9). <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 28 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). Prior to June 4, all salmon caught in this area must be landed and delivered in the State of Oregon.</p> <p>June 4-July 31 weekly landing and possession limit of 40 Chinook per vessel per landing week (Thurs.-Wed.)(C.8.f). Any remaining portion of Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period (C.8.b).</p> <p>All vessels fishing in this area during June and July, must land and deliver all salmon within this area or into Port Orford within 24 hours of any closure of this fishery and prior to fishing outside of this area(C.6).</p> <p>For all quota managed seasons (June and July), Oregon state regulations require fishers to notify ODFW within one hour of landing and prior to transport away from the port of landing by calling 541-867-0300 Ext. 252 or sending notification via e-mail to kmzor.trollreport@state.or.us, with vessel name and number, number of salmon by species, location of delivery, and estimated time of delivery.</p> <p>In 2021, 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 2020 (C.2, C.3, C.4). This season would open without quota or weekly landing limits unless modified following Council review at its March 2021 meeting (C.8).</p>

TABLE 1. 2020 Commercial troll management measures for non-Indian ocean salmon fisheries – Council adopted. (Page 3 of 7)
A. SEASON DESCRIPTIONS
South of Cape Falcon
Supplemental Management Information
<p>OR/CA Border to Humboldt South Jetty (California KMZ)</p> <ul style="list-style-type: none"> • Closed (C.9). <p>In 2021, the season will open May 1 through the earlier of May 31, or a 3,000 Chinook quota. Chinook minimum size limit of 27 inches total length. Landing and possession limit of 20 Chinook per vessel per day (C.8.f). Open five days per week (Fri.-Tue.). All salmon except coho (C.4, C.7). Any remaining portion of Chinook quotas may be transferred inseason on an impact neutral basis to the next open quota period (C.8.b). All fish caught in this area must be landed within the area, within 24 hours of any closure of the fishery (C.6), and prior to fishing outside the area (C.10). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). Klamath Control Zone closed (C.5.e). See California State regulations for an additional closures adjacent to the Smith River. This opening could be modified following Council review at its March or April 2021 meetings.</p>
<p>Humboldt South Jetty to Horse Mt.</p> <ul style="list-style-type: none"> • Closed. <p>When the fishery is closed between the OR/CA border and Humboldt Mountain (C.11) 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>
<p>Horse Mt. to Point Arena (Fort Bragg)</p> <ul style="list-style-type: none"> • August 1-10; • September 1-30 (C.8.g, C.9). <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California and north of Point Arena (C.6).</p> <p>In 2021, the season will open April 15 for all salmon except coho. Chinook minimum size limit of 27 inches total length. Gear restrictions same as in 2020. This opening could be modified following Council review at its March or April 2021 meetings.</p>
<p>Point Arena to Pigeon Point (San Francisco)</p> <ul style="list-style-type: none"> • May 6-12, 18-31; • June 1-6, 14-30; • July 13-31; • August 1-28; • September 1-30 (C.8.g, C.9). <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length through August, then 26 inches thereafter (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California. All salmon caught in the area prior to September 1 must be landed and offloaded no later than 11:59 p.m., August 30 (C.6). During September, all salmon must be landed south of Point Arena (C.6, C.11).</p> <p>In 2021, the season will open May 1 for all salmon except coho. Chinook minimum size limit of 27 inches total length. Gear restrictions same as in 2020. This opening could be modified following Council review at its March or April 2021 meetings.</p> <p>Point Reyes to Point San Pedro (Fall Area Target Zone)</p> <ul style="list-style-type: none"> • October 1-2, 5-9, 12-15. <p>Open five days per week (Mon.-Fri.). All salmon except coho (C.4, C.7). Chinook minimum size limit of 26 inches total length (B, C.1). All salmon caught in this area must be landed between Point Arena and Pigeon Point (C.6, C.11). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).</p>
<p>Pigeon Point to U.S./Mexico Border (Monterey)</p> <ul style="list-style-type: none"> • May 1-12, 18-31; • June 1-6, 14-30; • July 13-31; • August 1-28 (C.8.g, C.9). <p>Open seven days per week. All salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3). All salmon must be landed in California. All salmon caught in the area must be landed and offloaded no later than 11:59 p.m., August 30 (C.6).</p> <p>In 2021, the season will open May 1 for all salmon except coho. Chinook minimum size limit of 27 inches total length. Gear restrictions same as in 2020. This opening could be modified following Council review at its March or April 2021 meeting.</p>
<p>For all commercial troll fisheries in California: 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>

TABLE 1. 2020 Commercial troll management measures for non-Indian ocean salmon fisheries – Council adopted. (Page 4 of 7)

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 KMZ)	28	21.5	-	-	None
OR/CA Border to Humboldt South Jetty (CA KMZ)	Closed	-	-	-	-
Horse Mt. to Pt. Arena (FB)	27	20.5	-	-	27
Pt. Arena to Pigeon Pt. (SF) through August	27	20.5	-	-	27
Pt. Arena to Pigeon Pt. (SF) September-October	26	19.5	-	-	26
Pigeon Pt. to U.S./Mexico Border (MO)	27	20.5	-	-	27

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 engaged in trolling. 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.

TABLE 1. 2020 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 5 of 7)

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

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

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

C.7. Incidental Halibut Harvest: License applications for incidental harvest for halibut during commercial salmon fishing must be obtained from IPHC. The application deadline was March 15, 2020 to obtain a 2020 license from IPHC.

During the 2020 salmon troll season, incidental harvest is authorized only during April, May, and June, and after June 30 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 44,899 pound 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.

Beginning May 1, 2020 through the end of the 2020 salmon troll fishery, and beginning April 1, 2021, until modified through inseason action or superseded by the 2021 management measures the following applies:

License holders may land no more than one Pacific halibut per each two Chinook, except one Pacific halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip.

Incidental Pacific halibut catch regulations in the commercial salmon troll fishery adopted for 2020, prior to any 2020 inseason action, will be in effect when incidental Pacific halibut retention opens on April 1, 2021 unless otherwise modified by inseason action at the March 2021 Council meeting.

- a. "C-shaped" yelloweye rockfish conservation area is an area to be voluntarily avoided for salmon trolling. NMFS and the Council request salmon trollers voluntarily avoid this area in order to protect yelloweye rockfish. The area is defined in the Pacific Council Halibut Catch Sharing Plan in the North Coast subarea (Washington marine area 3), with the following coordinates in the order listed:

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

C.8. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

- a. Chinook remaining from the May through June non-Indian commercial troll harvest guideline north of Cape Falcon may be transferred to the July through September harvest guideline if the transfer would not result in exceeding preseason impact expectations on any stocks.
- b. Chinook remaining from May, June, and/or July non-Indian commercial troll quotas in the Oregon or California KMZ may be transferred to the Chinook quota for the next open period if the transfer would not result in exceeding preseason impact expectations on any stocks.
- c. NMFS may transfer salmon 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.
- d. At the March 2021 meeting, the Council will consider inseason recommendations for special regulations for any experimental fisheries (proposals must meet Council protocol and be received in November 2020).
- e. If retention of unmarked coho (adipose fin intact) is permitted by inseason action, the allowable coho quota will be adjusted to ensure preseason projected impacts on all stocks is not exceeded.
- f. Landing limits may be modified inseason to sustain season length and keep harvest within overall quotas.
- g. NMFS may close fisheries through inseason action on the recommendation of the affected state(s) of Washington, Oregon or California where the recommendation to close is informed by an evaluation of actions or orders promulgated or issued by jurisdictions in these areas to address public health concerns related to COVID-19 concluding that these actions would likely make access to the fishery impracticable (e.g., restrictions on activities or closure of harbors, launch ramps and other forms of access) or would make information essential to manage and implement the fishery unavailable. NMFS should open fisheries closed on this basis through inseason action upon notice from the affected State(s) that said actions or orders making access to the fishery impracticable have been lifted and information essential to manage and implement the fishery would be available.

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.
- c. Check state regulations for details

TABLE 1. 2020 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 7 of 7)

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

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

C.11. Latitudes for geographical reference of major landmarks along the west coast. Source: 2018 West Coast federal salmon regulations. <https://www.govinfo.gov/content/pkg/FR-2018-05-01/pdf/2018-09164.pdf>.

Cape Flattery, WA	48°23'00" N lat.	Humboldt South Jetty, CA	40°45'53" N lat.
Cape Alava, WA	48°10'00" N lat.	Horse Mountain, CA	40°05'00" N lat.
Queets River, WA	47°31'42" N lat.	Point Arena, CA	38°57'30" N lat.
Leadbetter Point, WA	46°38'10" N lat.	Point Reyes, CA	37°59'44" N lat.
Cape Falcon, OR	45°46'00" N lat.	Point San Pedro, CA	37°35'40" N lat.
Florence South Jetty, OR	44°00'54" N lat.	Pigeon Point, CA	37°11'00" N lat.
South end Heceta Bank line, OR	44°00'54" N lat.	Point Sur, CA	36°18'00" N lat.
Humbug Mountain, OR	43°58'00" N lat.	Point Conception, CA	34°27'00" N lat.
Oregon-California border	42°00'00" N lat.		

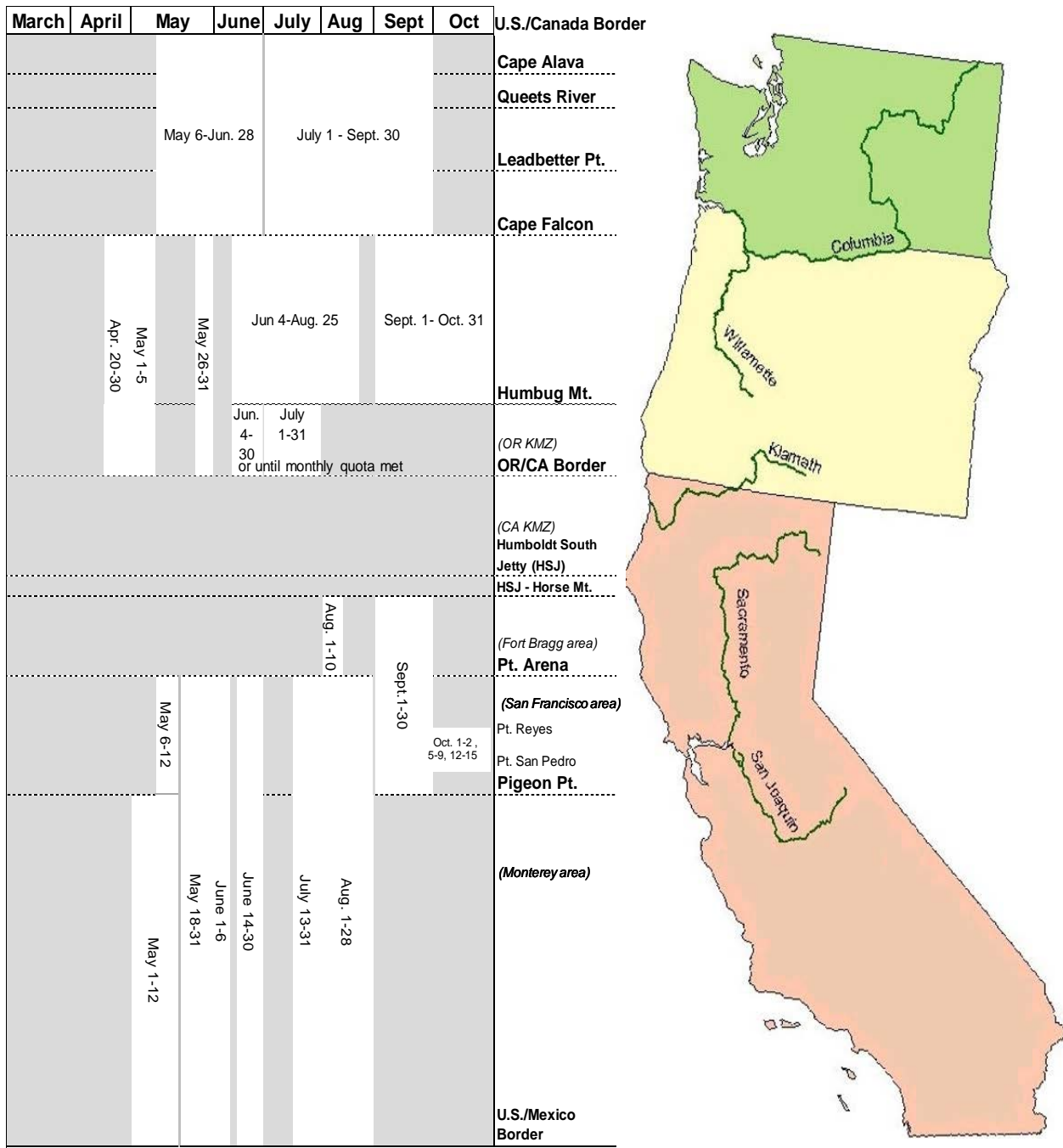


FIGURE 1. 2020 non-Indian commercial salmon seasons – Council adopted.

TABLE 2. 2020 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 1 of 5)

A. SEASON DESCRIPTIONS
North of Cape Falcon
Supplemental Management Information
<p>1. Overall non-Indian TAC: 54,000 Chinook and 28,500 coho marked with a healed adipose fin clip (marked). 2. Recreational TAC: 26,360 Chinook and 26,500 marked coho; all retained coho must be marked. 3. Commercial troll traded 2,560 marked coho to the recreational fishery for 640 Chinook. 4. No Area 4B add-on fishery. 5. Buoy 10 fishery opens August 1 with an expected landed catch of 16,280 marked coho in August and September.</p>
<p>U.S./Canada Border to Cape Alava (Neah Bay Subarea)</p> <ul style="list-style-type: none"> June 20 through the earlier of September 30, or 2,760 marked coho subarea quota, with a subarea guideline of 5,600 Chinook (C.5). <p>Open seven days a week. See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p> <p>During June 20-28: All salmon except coho; one salmon per day (C.1).</p> <p>Beginning June 29: All salmon, except no chum beginning August 1; two salmon per day. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line (C.4.a) during Council managed ocean fishery.</p>
<p>Cape Alava to Queets River (La Push Subarea)</p> <ul style="list-style-type: none"> June 20 through the earlier of September 30, or 690 marked coho subarea quota, with a subarea guideline of 1,300 Chinook (C.5). <p>Open seven days a week. See salmon minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p> <p>During June 20-28: All salmon except coho; one salmon per day (C.1).</p> <p>Beginning June 29: All salmon, except no chum beginning August 1; two salmon per day. All coho must be marked with a healed adipose fin clip (C.1).</p>
<p>Queets River to Leadbetter Point (Westport Subarea)</p> <ul style="list-style-type: none"> June 20 through the earlier of September 30, or 9,800 marked coho subarea quota, with a subarea guideline of 12,460 Chinook (C.5). <p>Chinook minimum size limit of 22 inches total length (B). Coho minimum size limit of 16 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>During June 20-28: Open seven days per week. All salmon except coho; one salmon per day (C.1).</p> <p>Beginning June 29: Open five days per week (Sun.-Thurs.). All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Grays Harbor Control Zone closed beginning August 10 (C.4.b).</p>
<p>Leadbetter Point to Cape Falcon (Columbia River Subarea)</p> <ul style="list-style-type: none"> June 20 through the earlier of September 30, or 13,250 marked coho subarea quota, with a subarea guideline of 7,000 Chinook (C.5). <p>Chinook minimum size limit of 22 inches total length (B). Coho minimum size limit of 16 inches total length (B). See gear restrictions and definitions (C.2, C.3).</p> <p>During June 20-28: Open seven days per week. All salmon except coho; one salmon per day (C.1).</p> <p>Beginning June 29, open seven days per week. All salmon; two salmon per day, no more than one of which may be a Chinook. All coho must be marked with a healed adipose fin clip (C.1).</p> <p>Columbia Control Zone closed (C.4.c).</p>
<p>For all Recreational fisheries north of Cape Falcon: 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).</p>

TABLE 2. 2020 Recreational management measures for non-Indian ocean salmon fisheries – Council adopted. (Page 2 of 5)

A. SEASON DESCRIPTIONS
South of Cape Falcon
Supplemental Management Information
<ol style="list-style-type: none"> 1. Sacramento River fall Chinook spawning escapement of 233,174 hatchery and natural area adults. 2. Sacramento Index exploitation rate of 50.7%. 3. Klamath River recreational fishery allocation: 1,296 adult Klamath River fall Chinook. 4. Klamath tribal allocation: 8,632 adult Klamath River fall Chinook. 5. Overall recreational coho TAC: 22,000 coho marked with a healed adipose fin clip (marked), and 3,000 coho in the non-mark-selective coho fishery. 6. Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the California Fish and Game Commission (CFGC).
<p>Cape Falcon to Humbug Mt.</p> <ul style="list-style-type: none"> • March 15-October 31 (C.6), except as provided below during the all-salmon mark-selective fishery and the non-mark-selective coho fishery (C.5). <p>Open seven days per week. All salmon except coho, two fish per day (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p> <p>In 2021, the season will open March 15 for all salmon except coho, two salmon per day (C.1). Same minimum size limits (B), and the same gear restrictions as in 2020 (C.2, C.3). This opening could be modified following Council review at its March 2021 meeting (C.5).</p>
<p>Cape Falcon to Humbug Mt. <u>Mark-selective coho fishery:</u></p> <ul style="list-style-type: none"> • June 27 through the earlier of August 16, or 22,000 marked coho quota (C.5.g, C.6). <p>Open seven days per week. All salmon, two salmon per day. All retained coho must be marked with a healed adipose fin clip (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p> <p>Any remainder of the mark-selective coho quota may be transferred inseason on an impact neutral basis to the non-selective coho quota from Cape Falcon to Humbug Mountain (C.5).</p>
<p>Cape Falcon to Humbug Mt. <u>Non-mark-selective coho fishery:</u></p> <ul style="list-style-type: none"> • September 4-5, and open each Friday and Saturday through the earlier of September 30, or 3,000 non-mark-selective coho quota (C.5.g, C.6). Open days may be modified inseason. <p>All salmon, two salmon per day (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p>
<p>Humbug Mt. to OR/CA Border (Oregon KMZ)</p> <ul style="list-style-type: none"> • June 20-August 7 (C.5.g, C.6). <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). See minimum size limits (B). See gear restrictions and definitions (C.2, C.3).</p>
<p>For Recreational Fisheries from Cape Falcon to Humbug Mt.: 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>

TABLE 2. 2020 Recreational management measures for non-Indian ocean salmon fisheries – Council adopted. (Page 3 of 5)

A. SEASON DESCRIPTIONS
<p>OR/CA Border to Horse Mt. (California KMZ)</p> <ul style="list-style-type: none"> • June 6-August 9 (C.5.f, C.5.g, C.6). <p>Open seven days per week. All salmon except coho, two salmon 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>Klamath Control Zone closed in August (C.4.e). See California State regulations for additional closures adjacent to the Smith, Eel, and Klamath Rivers.</p> <p>In 2021, season opens May 1 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B); and the same gear restrictions as in 2020 (C.2, C.3). This opening could be modified following Council review at its March 2021 meeting.</p>
<p>Horse Mt. to Point Arena (Fort Bragg)</p> <ul style="list-style-type: none"> • May 1-November 8 (C.5.f, C.5.g, C.6). <p>Open seven days per week. All salmon except coho, two salmon 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 2021, season opens April 3 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length (B); and the same gear restrictions as in 2020 (C.2, C.3). This opening could be modified following Council review at its March 2021 meeting.</p>
<p>Point Arena to Pigeon Point (San Francisco)</p> <ul style="list-style-type: none"> • May 1-November 8 (C.5.f, C.5.g, C.6). <p>Open seven days per week. All salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 20 inches total length. See gear restrictions and definitions (C.2, C.3).</p> <p>In 2021, season opens April 3 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2020 (C.2, C.3). This opening could be modified following Council review at its March 2021 meeting.</p>
<p>Pigeon Point to U.S./Mexico Border (Monterey)</p> <ul style="list-style-type: none"> • May 1-October 4 (C.5.f, C.5.g, C.6). <p>Open seven days per week. All salmon except coho, two salmon 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 2021, season opens April 3 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B); and the same gear restrictions as in 2020 (C.2, C.3). This opening could be modified following Council review at its March 2021 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 (Westport and Col R)	22	16	None
North of Cape Falcon (Neah Bay and La Push)	24	16	None
Cape Falcon to Humbug Mt.	24	16	None
Humbug Mt. to OR/CA Border (OR KMZ)	24	-	None
OR/CA Border to Horse Mt. (CA KMZ)	20	-	20
Horse Mt. to Pt. Arena (FB)	20	-	20
Pt. Arena to Pigeon Pt. (SF)	20	-	20
Pigeon Pt. to U.S./Mexico Border (MO)	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.
- 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).

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

- 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 (adipose fin intact) coho. To remain consistent with preseason expectations, any inseason action shall consider, if significant, the difference between observed and preseason forecasted (adipose-clipped) 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.
 - f. NMFS may by inseason action close recreational fisheries between May 1 and June 15, 2020 in the Fort Bragg, San Francisco, and Monterey subareas on the recommendation of the California Department of Fish and Wildlife. The recommendation to close would be informed by an evaluation of actions or orders enacted by jurisdictions in these subareas to address public health concerns related to COVID-19 that would make access to the ocean salmon recreational fishery impracticable (e.g., restrictions on activities or closure of harbors, launch ramps and other forms of access). If NMFS closes these subareas May 1-15, May 16-31, June 1-15, or an additive combination of these specific date ranges in succession; NMFS may by inseason action extend the season in the California KMZ beyond August 9 not to exceed August 31 if the STT determines that such opening would not increase impacts to stocks in the FMP beyond those described in Table 5 of Pre-III for 2020, and would otherwise meet the objectives described in that table, including but not limited to 50/50 harvest sharing with the Klamath River Tribes (Yurok and Hoopa Valley Tribe).
 - g. NMFS may close fisheries through inseason action on the recommendation of the affected state(s) of Washington, Oregon or California where the recommendation to close is informed by an evaluation of actions or orders promulgated or issued by jurisdictions in these areas to address public health concerns related to COVID-19 concluding that these actions would likely make access to the fishery impracticable (e.g., restrictions on activities or closure of harbors, launch ramps and other forms of access) or would make information essential to manage and implement the fishery unavailable. NMFS should open fisheries closed on this basis through inseason action upon notice from the affected State(s) that said actions or orders making access to the fishery impracticable have been lifted and information essential to manage and implement the fishery would be available.
- 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.

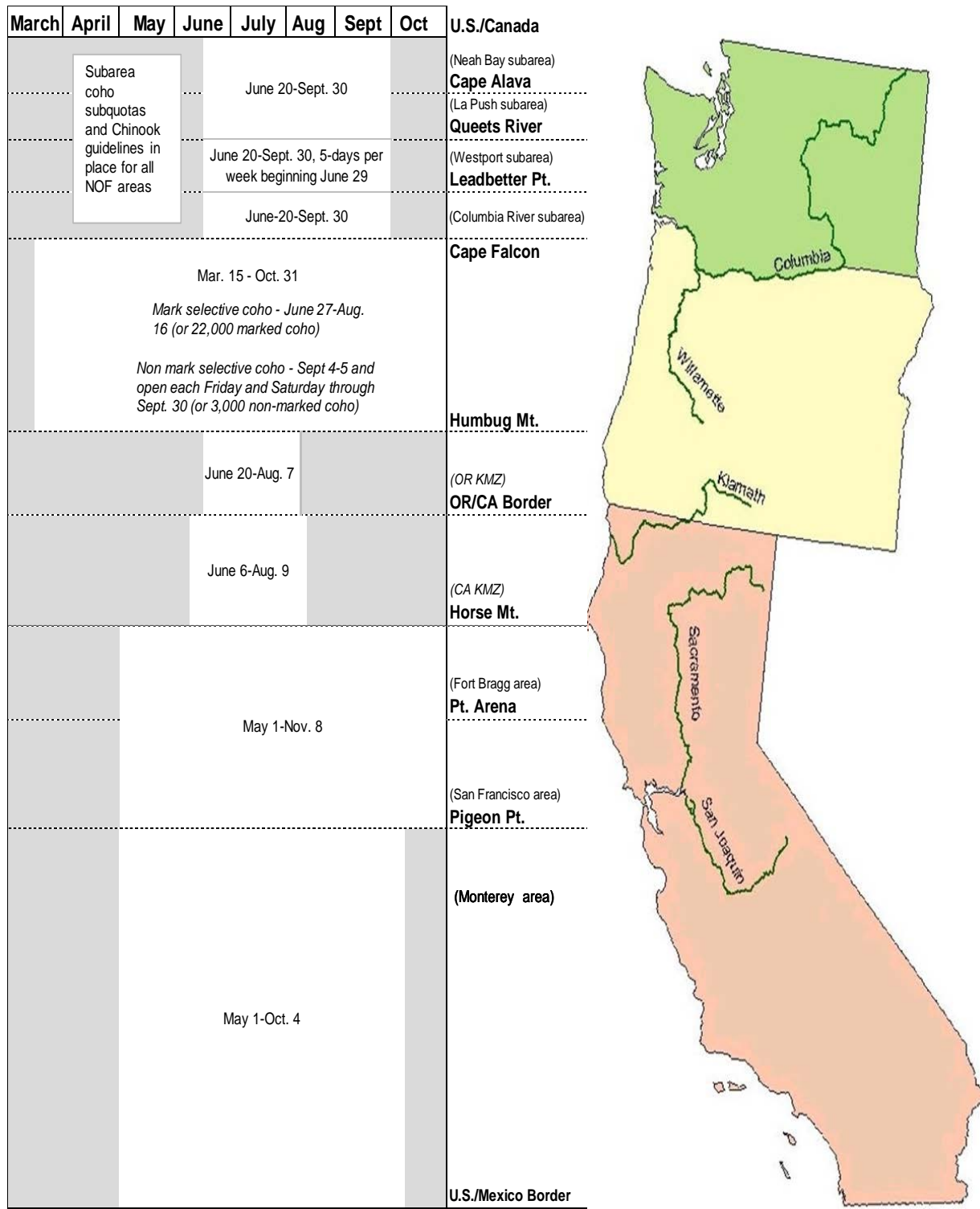


FIGURE 2. 2020 recreational salmon seasons – Council adopted.

TABLE 3. 2020 Treaty Indian ocean troll management measures for ocean salmon fisheries - Council adopted. (Page 1 of 2)

A. SEASON DESCRIPTIONS
Supplemental Management Information
1. Overall Treaty-Indian TAC: 35,000 Chinook and 16,500 coho. 2. Overall Chinook and/or coho TACs may need to be reduced or fisheries adjusted to meet NMFS ESA guidance, FMP requirements, upon conclusion of negotiations in the North of Falcon forum, or upon receipt of preseason catch and abundance expectations for Canadian and Alaskan fisheries.
<ul style="list-style-type: none"> • May 1 through the earlier of June 30 or 17,500 Chinook quota. All salmon may be retained except coho. If the Chinook quota is exceeded, the excess will be deducted from the later all-salmon season (C.5). See size limit (B) and other restrictions (C).
<ul style="list-style-type: none"> • July 1 through the earlier of September 15, or 17,500 Chinook quota, or 16,500 coho quota. All Salmon. See size limit (B) and other restrictions (C).

B. MINIMUM LENGTH (TOTAL 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 (defined to include those waters of Puget Sound easterly of a line projected from the Bonilla Point light on Vancouver Island to the Tatoosh Island light, thence to the most westerly point on Cape Flattery and westerly of a line projected true north from the fishing boundary marker at the mouth of the Sekiu River [WAC 220-301-030]).

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 - A polygon commencing at Cape Alava, located at latitude 48°10'00" north, longitude 124°43'56.9" west; then proceeding west approximately forty nautical miles at that latitude to a northwestern point located at latitude 48°10'00" north, longitude 125°44'00" west; then proceeding in a southeasterly direction mirroring the coastline at a distance no farther than forty nautical miles from the mainland Pacific coast shoreline at any line of latitude, to a southwestern point at latitude 47°31'42" north, longitude 125°20'26" west; then proceeding east along that line of latitude to the Pacific coast shoreline at latitude 47°31'42" north, longitude 124°21'9.0" west.

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 - A polygon commencing at the Pacific coast shoreline near Destruction Island, located at latitude 47°40'06" north, longitude 124°23'51.362" west; then proceeding west approximately thirty nautical miles at that latitude to a northwestern point located at latitude 47°40'06" north, longitude 125°08'30" west; then proceeding in a southeasterly direction mirroring the coastline no farther than thirty nautical miles from the mainland Pacific coast shoreline at any line of latitude, to a southwestern point at latitude 46°53'18" north, longitude 124°53'53" west; then proceeding east along that line of latitude to the Pacific coast shoreline at latitude 46°53'18" north, longitude 124°7'36.6" west.

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 may continue a ceremonial and subsistence fishery during the time frame of October 1 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 2020 season (estimated harvest during the October ceremonial and subsistence fishery: 20 Chinook; 40 coho).

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

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 2020 ocean salmon fishery management measures - Council adopted.

Fishery or Quota Designation	Chinook	Coho
NORTH OF CAPE FALCON		
TREATY INDIAN OCEAN TROLL ^{a/}		
U.S./Canada Border to Cape Falcon (All Except Coho)	17,500	-
U.S./Canada Border to Cape Falcon (All Species)	17,500	16,500
Subtotal Treaty Indian Ocean Troll	35,000	16,500
NON-INDIAN COMMERCIAL TROLL ^{b/}		
U.S./Canada Border to Cape Falcon (All Except Coho)	13,820	-
U.S./Canada Border to Cape Falcon (All Species)	13,820	2,000
Subtotal Non-Indian Commercial Troll	27,640	2,000
RECREATIONAL		
U.S./Canada Border to Cape Alava ^{b/}	5,600	2,760
Cape Alava to Queets River ^{b/}	1,300	690
Queets River to Leadbetter Pt. ^{b/}	12,460	9,800
Leadbetter Pt. to Cape Falcon ^{b/c/}	7,000	13,250
Subtotal Recreational	26,360	26,500
TOTAL NORTH OF CAPE FALCON	89,000	45,000
SOUTH OF CAPE FALCON		
COMMERCIAL TROLL ^{a/}		
Humbog Mt. to OR/CA Border	1,000	-
OR/CA Border to Humboldt South Jetty	-	-
Subtotal Troll	1,000	-
RECREATIONAL		
Cape Falcon to OR/CA Border	-	25,000 ^{d/}
TOTAL SOUTH OF CAPE FALCON	1,000	25,000

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 17,600 Chinook and 16,280 marked coho.

d/ The quota consists of both mark-selective and non-mark-selective quotas of 22,000 and 3,000, respectively.

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2020 ocean salmon fishery management measures - Council adopted.^{a/} (Page 1 of 4)

Key Stock/Criteria	2020		Spawner Objective or Other Comparative Standard as Noted ^{b/}
	PROJECTED	Criteria	
CHINOOK	CHINOOK		CHINOOK
SRKW PREY ABUNDANCE:			
North of Falcon	1,249.8	≥ 972.0	Oct 1 starting abundance of age 3+ Chinook from U.S./Canada Border to Cape Falcon
Falcon to Horse Mt.	1,070.2	NA	Oct 1 starting abundance of age 3+ Chinook from Cape Falcon to Horse Mt.
South of Horse Mt.	542.4	NA	Oct 1 starting abundance of age 3+ Chinook south of Horse Mt.
PUGET SOUND:			
Elwha Summer/Fall	3.3%	≤ 10.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
Dungeness Spring	3.4%	≤ 10.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
Mid-Hood Canal Summer/Fall	12.2%	TBD	Preterminal Southern U.S. exploitation rate. Discussions are ongoing between WA state and tribal co-managers regarding a conservation standard for 2020 that is in accordance with NMFS guidance.
Skokomish Summer/Fall	48.3%	≤ 50.0%	Total exploitation rate (NMFS ESA consultation standard).
Nooksack Spring	10.5%	≤ 10.5%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
	0.94	≤ 1.00	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Skagit Summer/Fall	48.0%	≤ 48.0%	Total exploitation rate (NMFS ESA consultation standard).
	--	≤ 0.95	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Skagit Spring	9.0%	≤ 10.3%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
	--	≤ 0.95	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Stillaguamish Summer/Fall	18.4%	≤ 22.0%	Rebuilding exploitation rate (NMFS ESA consultation standard).
	0.48	≤ 1.00	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Snohomish Summer/Fall	7.7%	≤ 8.0%	Southern U.S. exploitation rate limit under critical abundance forecast for 2020 (NMFS ESA consultation standard).
	0.65	≤ 1.00	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Lake Washington Summer/Fall	0.571	≥ 0.500	Natural-origin escapement in the Cedar River (NMFS ESA consultation standard).
Green River Summer/Fall	≥ 1.200	≥ 1.200	Natural-origin spawning escapement (NMFS ESA consultation standard). Spawner objective can be met through fishery mgmt and/or hatchery broodstock management actions.
White River Spring	15.7%	≤ 22.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
Puyallup Summer/Fall	1.157	≥ 0.750	Natural-origin spawning escapement (NMFS ESA consultation standard). Spawner objective can be met through fishery mgmt and/or hatchery broodstock management actions.
Nisqually River Summer/Fall	48.8%	≤ 47.0%	Total exploitation rate, (NMFS ESA consultation standard). An additional 2% ER may be added to facilitate inriver selective gear studies after meeting base criteria during final preseason modeling.
Puget Sound Spring	1.8%	≤ 3.0%	Exploitation rate in PFMC fisheries (NMFS ESA consultation standard).
Puget Sound Summer/Fall	4.8%	≤ 6.0%	Exploitation rate in PFMC fisheries (NMFS ESA consultation standard).

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2020 ocean fishery management measures - Council Adopted.^{a/} (Page 2 of 4)

Key Stock/Criteria	PROJECTED	2020 Criteria	Spawner Objective or Other Comparative Standard as Noted ^{b/}
CHINOOK	CHINOOK		CHINOOK
<u>WASHINGTON COAST:</u>			
Hoko Fall	2.170	0.85	FMP MSY spawning escapement objective.
	2.3%	≤ 10.0%	Calendar year exploitation rate ISBM obligation. Compliance assessed postseason by the PSC.
Quillayute Fall	>3.0	3.0	FMP MSY spawning escapement objective.
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Hoh Fall	>1.2	1.2	FMP MSY spawning escapement objective.
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Queets Fall	>2.5	2.5	FMP MSY spawning escapement objective.
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Grays Harbor Fall	>13.3	13.3	FMP MSY spawning escapement objective.
	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
<u>COLUMBIA RIVER:</u>			
Columbia Upriver Brights	227.0	74.0	Minimum ocean escapement to attain 40.0 adults over McNary Dam, with normal distribution and no mainstem harvest. The management goal has been increased to 60.0 by Columbia River managers.
Mid-Columbia Brights	77.5	14.9	Minimum ocean escapement to attain 7.9 for Little White Salmon egg-take, assuming average conversion and no mainstem harvest.
Columbia Lower River Hatchery Tules	50.0	25.0	Minimum ocean escapement to attain 14.8 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest.
Columbia Lower River Natural Tules (threatened)	38.0%	≤ 38.0%	Total adult equivalent fishery exploitation rate (2020 NMFS ESA guidance).
Columbia Lower River Wild ^{a/} (threatened)	19.2	6.9	Minimum ocean escapement to attain MSY spawner goal of 5.7 for N. Lewis River fall Chinook (NMFS ESA consultation standard).
Spring Creek Hatchery Tules	45.5	8.2	Minimum ocean escapement to attain 6.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Upper Columbia River Summer	38.0	29.0	Aggregate escapement to mouth of Columbia River.
Snake River Fall (threatened) SRFI	51.3%	≤ 70.0%	Of 1988-1993 base period exploitation rate for all ocean fisheries (NMFS ESA consultation standard).

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2020 ocean fishery management measures - Council Adopted.^{a/} (Page 3 of 4)

Key Stock/Criteria	PROJECTED	2020 Criteria	Spawner Objective or Other Comparative Standard as Noted ^{b/}
CHINOOK	CHINOOK		CHINOOK
OREGON COAST:			
Nehalem Fall	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Siletz Fall	--	≤ 0.85	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Siuslaw Fall	--	≤ 0.85	ISBM obligation applicable, escapement goal not expected to be met. Compliance assessed postseason by the PSC.
South Umpqua	--	≤ 0.85	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Coquille	--	≤ 0.85	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
CALIFORNIA:			
Klamath River Fall	36.2	≥ 36.2	2020 minimum natural area adult escapement (FMP control rule).
Federally recognized tribal harvest	50.0%	50.0%	Equals 8.6 (thousand) adult fish for Yurok and Hoopa Valley tribal fisheries.
Exploitation (spawner reduction) rate	25.0%	≤ 25.0%	FMP control rule.
Adult river mouth return	59.1	NA	Total adults in thousands.
Age-4 ocean harvest rate	8.8%	≤ 16.0%	NMFS ESA consultation standard for threatened California Coastal Chinook.
KMZ sport fishery share	8.6%		Includes 0.0 (thousand) adult fish impacted in the KMZ sport fishery during fall (Sept-Dec) 2019.
River recreational fishery share	15.0%	NA	Equals 1.3 (thousand) adult fish for recreational inriver fisheries.
Sacramento River Winter (endangered)	16.2%	≤ 20.0%	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. between the first Saturday in April and the second Sunday in November; Pigeon Pt. to the U.S./Mexico border between the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. <u>Commercial</u> - Pt. Arena to the U.S./Mexico border between May 1 and September 30, except Pt. Reyes to Pt. San Pedro between October 1 and 15 (Monday-Friday). Minimum size limit ≥ 26 inches total length (NMFS 2020 ESA Guidance).
Sacramento River Fall	233.2	≥ 142.0	2020 minimum hatchery and natural area adult escapement (FMP control rule).
Sacramento Index Exploitation Rate	50.7%	≤ 70.0%	FMP control rule.
Ocean commercial impacts	151.3		Includes fall (Sept-Dec) 2019 impacts (5.7 thousand SRFC).
Ocean recreational impacts	47.6		Includes fall (Sept-Dec) 2019 impacts (3.3 thousand SRFC).
River recreational impacts	41.1		Equals 17.1% of the total harvest.

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2020 ocean fishery management measures - Council Adopted.^{a/} (Page 4 of 4)

Key Stock/Criteria	PROJECTED	2020 Criteria	Spawner Objective or Other Comparative Standard as Noted ^{b/}
COHO	COHO	COHO	COHO
Interior Fraser (Thompson River)	7.4%(2.6%)	≤ 10.0%	2020 Southern U.S. exploitation rate ceiling; PSC coho agreement.
Skagit	31.1%(2.5%)	≤ 35.0%	2020 total exploitation rate ceiling; FMP matrix ^{d/}
Stillaguamish	17.8%(1.8%)	≤ 35.0%	2020 total exploitation rate ceiling; FMP matrix ^{d/}
Snohomish	12.6%(1.8%)	≤ 20.0%	2020 total exploitation rate ceiling; FMP matrix ^{d/}
Hood Canal	42.2%(2.7%)	≤ 45.0%	2020 total exploitation rate ceiling; FMP matrix ^{d/}
Strait of Juan de Fuca	9.0%(2.2%)	≤ 20.0%	2020 total exploitation rate ceiling; FMP matrix ^{d/}
Quillayute Fall	8.7	6.3	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
Hoh	3.6	2.0	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
Queets Wild	6.7	5.8	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
Grays Harbor	47.1	24.4	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
Willapa Bay	27.7	17.2	FMP MSY natural area adult spawner estimate. Value depicted is ocean escapement.
Lower Columbia River Natural (threatened)	16.9%	≤ 18.0%	Total marine and mainstem Columbia R. fishery exploitation rate (2020 NMFS ESA guidance).
Upper Columbia ^{c/}	69.7%	≥ 50%	Minimum percentage of the run to Bonneville Dam.
Columbia River Hatchery Early	86.7	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	35.4	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	11.6%	≤ 15.0%	Marine and freshwater fishery exploitation rate (NMFS ESA consultation standard).
Southern Oregon/Northern California Coast (threatened)	3.1%	≤ 13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).

a/ Reflects 2020 fisheries and abundance estimates.

b/ ISBM obligation is assessed as a proportion of the 2009-2015 average calendar year exploitation rate. Ocean escapement is the number of salmon escaping ocean fisheries and entering freshwater with the following clarifications. Ocean escapement for Puget Sound stocks is the estimated number of salmon entering Area 4B that are available to U.S. net fisheries in Puget Sound and spawner escapement after impacts from the Canadian, U.S. ocean, and Puget Sound troll and recreational fisheries have been deducted. Numbers in parentheses represent Council area exploitation rates for Puget Sound coho stocks. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. Exploitation rates for LCN and OCN coho and LCR Tule Chinook represent marine and freshwater impacts. Values reported for Klamath River fall Chinook and Willapa Bay coho are natural area adult spawners. Values reported for Sacramento River fall Chinook are hatchery and natural area adult spawners.

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

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 minor contributions from East Fork Lewis River and Sandy River.

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2020 ocean salmon fishery management measures - Council adopted. (Page 1 of 2)

Area and Fishery	Catch Projection	Bycatch Mortality ^{a/} Projection	Bycatch Projection ^{b/}	Observed in 2019	
				Catch	Bycatch Mortality
OCEAN FISHERIES:					
CHINOOK (thousands of fish)					
NORTH OF CAPE FALCON					
Treaty Indian Ocean Troll	35.0	3.6	8.9	18.3	1.9
Non-Indian Commercial Troll	27.6	12.7	46.0	23.3	9.6
Recreational	26.4	3.2	14.8	10.9	1.8
CAPE FALCON TO HUMBUG MT.^{d/}					
Commercial Troll	39.4	13.0	39.3	26.5	9.0
Recreational	6.1	0.8	3.2	4.7	0.7
HUMBUG MT. TO OR/CA BORDER^{d/}					
Commercial Troll	1.3	0.4	1.3	1.9	0.8 ^{e/}
Recreational	1.6	0.2	0.8	0.6	0.1 ^{e/}
OR/CA BORDER TO HORSE MT.^{d/}					
Commercial Troll	0.0	0.0	0.0	5.9	2.5 ^{e/}
Recreational	5.6	0.8	2.9	5.0	0.8 ^{e/}
HORSE MT. TO PT. ARENA					
Commercial Troll	7.8	2.6	7.8	10.5	7.8 ^{e/}
Recreational	8.1	1.1	4.3	3.9	0.8 ^{e/}
PT. ARENA TO PIGEON PT.					
Commercial Troll	96.9	32.0	96.8	159.4	65.7 ^{e/}
Recreational	41.2	5.6	19.7	56.5	8.0 ^{e/}
SOUTH OF PIGEON PT.					
Commercial Troll	39.3	13.0	39.2	95.9	13.7 ^{e/}
Recreational	7.5	1.0	3.6	23.1	2.4 ^{e/}
TOTAL OCEAN FISHERIES					
Commercial Troll	247.2	77.2	239.2	341.7	111.0
Recreational	96.4	12.8	49.4	104.7	14.7
INSIDE FISHERIES:					
Area 4B	-	-	-	-	-
Buoy 10	17.6	10.4	2.0	11.3	3.5 ^{e/}

TABLE 6. Preliminary projections of Chinook and coho harvest impacts for 2020 ocean salmon fishery management measures - Council adopted. (Page 2 of 2)

Area and Fishery	Catch Projection	Bycatch Mortality ^{a/} Projection	Bycatch Projection ^{b/}	Observed in 2019	
				Catch	Bycatch Mortality
OCEAN FISHERIES:					
COHO (thousands of fish)					
NORTH OF CAPE FALCON					
Treaty Indian Ocean Troll ^{f/}	16.5	1.5	3.4	55.5	3.4
Non-Indian Commercial Troll	2.0	2.8	10.2	5.4	1.6
Recreational	26.5	6.3	29.0	81.6	20.4
SOUTH OF CAPE FALCON					
Commercial Troll	-	2.4	9.1	-	1.9
Recreational ^{f/}	25.0	9.3	49.1	49.1	9.4
TOTAL OCEAN FISHERIES					
Commercial Troll	18.5	6.7	22.8	60.9	6.9
Recreational	51.5	15.6	78.2	130.7	29.8
INSIDE FISHERIES:					
Area 4B	-	-	-	-	-
Buoy 10	16.3	3.9	17.6	22.8	6.3 ^{e/}

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: 16% (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/ The commercial fishery in this area is closed between Humboldt South Jetty and Horse Mountain.

e/ Based on reported released Chinook or coho. Reported releases in California fisheries are used as a surrogate in Oregon fisheries.

f/ 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 tulle Chinook exploitation rates by fishery for 2020 ocean salmon fisheries - Council adopted.

Fishery	Exploitation Rate (Percent)			
	LCN Coho	OCN Coho	RK Coho	LCR Tule Chinook
SOUTHEAST ALASKA	0.0%	0.0%	0.0%	2.4%
BRITISH COLUMBIA	0.3%	0.6%	0.5%	13.6%
PUGET SOUND/STRAIT	0.1%	0.0%	0.0%	0.4%
NORTH OF CAPE FALCON				
Treaty Indian Ocean Troll	1.4%	0.3%	0.0%	1.9%
Recreational	3.8%	0.7%	0.0%	3.6%
Non-Indian Troll	0.8%	0.2%	0.0%	4.8%
SOUTH OF CAPE FALCON				
Recreational:				0.2%
Cape Falcon to Humbug Mt.	3.5%	6.6%	0.5%	-
Humbug Mt. to OR/CA border (KMZ)	0.0%	0.1%	0.2%	-
OR/CA border to Horse Mt. (KMZ)	0.0%	0.2%	0.7%	-
Fort Bragg	0.0%	0.2%	0.7%	-
South of Pt. Arena	0.0%	0.1%	0.2%	-
Troll:				1.1%
Cape Falcon to Humbug Mt.	0.4%	0.6%	0.1%	-
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%	0.0%	0.1%	-
South of Pt. Arena	0.0%	0.3%	0.2%	-
BUOY 10	2.8%	0.2%	0.0%	10.0%
ESTUARY/FRESHWATER	3.5%	1.4%	0.3%	
TOTAL^{a/}	16.9%	11.6%	3.1%	38.0%

a/ Totals do not include estuary/freshwater for RK coho; estuary/freshwater catch is included in the total for LCN, OCN, and LCR Tule Chinook.

TABLE 8. 2020 projected coho mark rates for mark-selective fisheries under Council adopted management measures (percent marked).

Area	Fishery	June	July	August	September
Canada					
Johnstone Strait	Recreational	55%	46%	47%	--
West Coast Vancouver Island	Recreational	56%	48%	40%	39%
North Georgia Strait	Recreational	58%	60%	59%	56%
South Georgia Strait	Recreational	28%	61%	46%	57%
Juan de Fuca Strait	Recreational	54%	53%	53%	49%
Johnstone Strait	Troll	--	--	--	--
NW Vancouver Island	Troll	53%	44%	43%	20%
SW Vancouver Island	Troll	57%	53%	51%	--
Georgia Strait	Troll	--	--	--	--
Puget Sound					
Strait of Juan de Fuca (Area 5)	Recreational	--	55%	53%	52%
Strait of Juan de Fuca (Area 6)	Recreational	--	55%	55%	50%
San Juan Island (Area 7)	Recreational	--	62%	54%	39%
North Puget Sound (Areas 6 & 7A)	Net	--	--	61%	43%
Council Area					
Neah Bay (Area 4/4B)	Recreational	50%	55%	53%	54%
LaPush (Area 3)	Recreational	53%	55%	56%	52%
Westport (Area 2)	Recreational	57%	57%	54%	49%
Columbia River (Area 1)	Recreational	60%	58%	55%	53%
Tillamook	Recreational	55%	52%	44%	26%
Newport	Recreational	52%	47%	42%	27%
Coos Bay	Recreational	41%	37%	24%	12%
Brookings	Recreational	--	--	--	--
Neah Bay (Area 4/4B)	Troll	--	55%	53%	48%
LaPush (Area 3)	Troll	--	57%	52%	51%
Westport (Area 2)	Troll	--	54%	53%	54%
Columbia River (Area 1)	Troll	--	56%	53%	53%
Tillamook	Troll	--	--	--	--
Newport	Troll	--	--	--	--
Coos Bay	Troll	--	--	--	--
Brookings	Troll	--	--	--	--
Columbia River					
Buoy 10	Recreational	--	--	--	55%

TABLE 9. Preliminary projected exvessel value by catch area under Council-adopted 2020 non-Indian commercial troll management measures compared with 2019 and the 2015-2019 average (inflation-adjusted 2019 dollars).

Management Area	Exvessel Value (thousands of dollars) ^{a/}			Percent Change	
	2020 Projected ^{b/}	2019	2015-2019 Average	From 2019 (Modeled)	From 2015-2019 Average
North of Cape Falcon	2,236	1,941	2,825	+15%	-21%
Cape Falcon to Humbug Mt.	2,806	1,890	3,337	+48%	-16%
Humbug Mt. to OR/CA Border (OR KMZ)	96	143	199	-33%	-52%
OR/CA Border to Horse Mt. (CA KMZ)	0	314	212	-100%	-100%
Horse Mt. to Pt. Arena (Fort Bragg)	479	646	1,592	-26%	-70%
Pt. Arena to Pigeon Pt. (SF)	6,045	9,952	4,652	-39%	+30%
South of Pigeon Pt. (MO)	2,594	6,344	2,583	-59%	+0%
Total South of Cape Falcon	12,020	19,288	12,576	-38%	-4%
West Coast Total	14,256	21,229	15,400	-33%	-7%

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

b/ 2020 projections are based on expected catches in the Council management areas, 2019 exvessel prices and 2019 average weight per fish.

TABLE 10. Preliminary projected angler trips and associated state-level personal income impacts under Council-adopted recreational ocean salmon management measures compared with 2019 and the 2015-2019 average (inflation-adjusted 2019 dollars).

Management Area	Coastal Community Income Impacts ^{a/}							
	Angler Trips (thousands)			(thousands of dollars) ^{b/}			Percent Change in Income Impacts	
	2020 Projected	2019	2015-2019 Avg.	2020 Projected	2019	2015-2019 Avg.	Compared to 2019	Compared to 2015-2019 Avg.
North of Cape Falcon	29.6	80.4	71.2	3,982	10,823	10,127	-63%	-61%
Cape Falcon to Humbug Mt.	60.5	75.2	47.0	4,480	5,569	3,457	-20%	+30%
Humbug Mt. to OR/CA Border (OR KMZ)	5.1	4.4	5.3	315	271	326	+16%	-3%
OR/CA Border to Horse Mt. (CA KMZ)	11.6	7.7	6.6	1,436	954	805	+51%	+78%
Horse Mt. to Pt. Arena (Fort Bragg)	17.4	7.6	8.7	2,928	1,284	1,396	+128%	+110%
Pt. Arena to Pigeon Pt. (SF)	61.6	58.1	53.5	14,975	14,113	12,874	+6%	+16%
South of Pigeon Pt. (MO)	20.7	30.3	16.5	2,781	4,078	2,189	-32%	+27%
Total South of Cape Falcon	176.8	183.3	137.5	26,914	26,269	21,047	+2%	+28%
West Coast Total	206.4	263.6	208.7	30,896	37,092	31,174	-17%	-1%

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

b/ Dollar amounts are in inflation-adjusted 2019 values.

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

Environmental Component	No-Action	Alternative			Proposed	2020	Objective or Other Comparative Standard as Noted
	Alternative ^{b/}	I	II	III	Action	Criteria	
Chinook							
KRFC Spawning Escapement	24,178	36,213	36,208	40,714	36,206	≥ 36,206	2020 minimum natural area adult escapement.
Exploitation (spawner reduction) rate	49.9%	25.0%	25.0%	15.7%	25.0%	≤ 25.0%	FMP control rule.
SRFC Spawning Escapement	199,616	228,346	222,636	234,075	233,174	≥ 141,955	2020 minimum hatchery and natural area adult escapement.
Exploitation Rate	57.8%	51.7%	52.9%	50.5%	50.7%	≤ 70%	FMP control rule.
Canadian Stocks							
Interior Fraser Coho	NA	6.3%(2.3%)	5.7%(1.8%)	4.6%(0.6%)	7.4%(2.6%)	≤ 10.0%	2020 Southern U.S. exploitation rate ceiling; PSC coho agreement.
Puget Sound Coho							
Skagit	NA	34.1%(2.3%)	33.7%(1.7%)	32.8%(0.6%)	31.1%(2.5%)	≤ 35.0%	2020 total exploitation rate ceiling; FMP matrixd/
Stillaguamish	NA	27.1%(1.7%)	26.7%(1.2%)	26.0%(0.4%)	17.8%(1.8%)	≤ 35.0%	2020 total exploitation rate ceiling; FMP matrixd/
Snohomish	NA	24.0%(1.7%)	23.6%(1.2%)	22.9%(0.4%)	12.6%(1.8%)	≤ 20.0%	2020 total exploitation rate ceiling; FMP matrixd/
Hood Canal	NA	41.7%(2.6%)	41.3%(2.0%)	40.4%(0.7%)	42.2%(2.7%)	≤ 45.0%	2020 total exploitation rate ceiling; FMP matrixd/
Strait of Juan de Fuca	NA	8.4%(2.1%)	7.9%(1.6%)	6.8%(0.6%)	9.0%(2.2%)	≤ 20.0%	2020 total exploitation rate ceiling; FMP matrixd/
Washington Coastal Coho (in thousands of fish)							
Quillayute Fall Coho	NA	8.7	8.8	8.9	8.7	6.3	<u>For all Washington Coastal coho stocks listed:</u> FMP MSY adult spawner estimate. Value depicted is ocean escapement.
Hoh Coho	NA	3.6	3.7	3.8	3.6	2.0	
Queets Wild Coho	NA	6.7	6.8	7.1	6.7	5.8	
Grays Harbor Coho	NA	47.2	47.6	48.2	47.1	24.4	
Willapa Bay Natural Coho	NA	27.5	28.3	29.2	27.7	17.2	
ESA-Listed Salmon							
California Coastal Chinook	16.5%	8.9%	9.3%	6.1%	8.8%	≤ 16.0%	KRFC age-4 ocean harvest rate.
SRWC	15.5%	16.8%	17.7%	20.0%	16.2%	≤ 20.0%	SRWC age-3 ocean impact rate in fisheries south of Pt. Arena.
LCR Natural Tule Chinook ^{d/}	NA	35.9%	34.2%	28.3%	38.0%	≤ 38.0%	Total adult equivalent fishery exploitation rate.
LCN Coho ^{d/}	NA	15.1%	12.9%	9.7%	16.9%	≤ 18.0%	Total marine and mainstem Columbia fishery exploitation rate. (2020 NMFS ESA guidance).
OCN coho ^{d/}	NA	11.7%	11.1%	10.3%	11.6%	≤ 15.0%	Marine and freshwater fishery exploitation rate (NMFS ESA consultation standard).
SONCC (RK) coho	NA	3.2%	3.5%	2.7%	3.1%	≤ 13.0%	Marine fishery exploitation rate for R/K hatchery coho (NMFS ESA consultation standard).

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

Environmental Component	No-Action	Alternative			Proposed Action
	Alternative ^{b/}	I	II	III	
Socioeconomics					
Commercial Community Personal Income Impacts (thousands of dollars)					
North of Cape Falcon	2,860	3,570	2,681	-	3,216
Cape Falcon to Humbug Mt.	2,718	4,606	4,635	3,545	3,998
Humbug to OR/CA border (OR KMZ)	231	277	245	170	235
OR/CA border to Horse Mt. (CA KMZ)	312	-	200	-	-
Horse Mt. to Pt. Arena (Fort Bragg)	864	1,611	99	97	640
Pt. Arena to Pigeon Pt. (San Francisco)	21,970	11,382	13,070	9,841	13,131
South of Pigeon Pt. (Monterey)	5,618	2,264	2,575	3,853	2,299
West Coast Total	34,573	23,710	23,506	17,506	23,519
Recreational Community Personal Income Impacts (thousands of dollars)					
North of Cape Falcon	10,823	4,474	3,360	-	3,982
Cape Falcon to Humbug Mt.	5,569	3,941	4,057	4,480	4,480
Humbug to OR/CA border (OR KMZ)	271	371	225	76	315
OR/CA border to Horse Mt. (CA KMZ)	954	1,230	1,133	456	1,436
Horse Mt. to Pt. Arena (Fort Bragg)	1,284	3,042	3,042	3,042	2,928
Pt. Arena to Pigeon Pt. (San Francisco)	14,113	15,835	15,823	14,978	14,975
South of Pigeon Pt. (Monterey)	4,078	4,600	4,579	4,543	2,781
West Coast Total	37,092	33,494	32,218	27,574	30,896

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. Data for Alternatives based on Table 5a of 2020 Preseason Report II.

b/ Socioeconomic impacts under the No-Action Alternative are assumed equal to 2019 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.

TABLE 12. Stock status relative to overfished and overfishing criteria. A stock is approaching an overfished condition if the 3-year geometric mean of the most recent two years and the forecasted spawning escapement is less than the minimum stock size threshold (MSST); a stock would experience overfishing if the total annual exploitation rate exceeds the maximum fishing mortality threshold (MFMT). Occurrences of stocks approaching an overfished condition, or experiencing overfishing, are indicated in bold. 2020 spawning escapement and exploitation rate estimates are based on 2020 preseason abundance forecasts and 2020 adopted Council regulations.

	Estimated Adult Spawning Escapement										Total Exploitation Rate					
	2015	2016	2017	2018	2019 ^{a/}	Forecast 2020 ^{b/}	3-yr Geo Mean	MSST	S _{MSY}	2015	2016	2017	2018	2019 ^{a/}	2020 ^{b/}	MFMT
Chinook																
Sacramento Fall	113,468	89,699	43,466	105,531	162,532	233,174	158,733	91,500	122,000	0.55	0.56	0.68	0.52	0.68	0.51	0.78
Klamath River Fall	28,112	13,937	19,904	52,352	20,245	36,206	33,730	30,525	40,700	0.59	0.37	0.10	0.32	0.42	0.25	0.71
Southern Oregon ^{c/}	30,462	27,278	91,977	39,497	19,426	NA	41,325	20,500	34,992	NA	NA	NA	NA	NA	NA	0.54
Central and Northern OR	247	118	114	92	64	NA	88	30 fish/mi	60 fish/mi	0.43	0.48	0.46	NA	NA	NA	0.78
Upper Columbia Bright - Fall ^{d/}	323,276	151,373	96,096	58,540	77,880	93,400	75,233	19,182	39,625	0.40	0.51	0.48	NA	NA	NA	0.86
Upper Columbia - Summer ^{d/}	88,691	79,253	56,265	38,816	41,090	35,500	38,399	6,072	12,143	0.65	0.63	0.52	NA	NA	NA	0.75
Willapa Bay - Fall ^{e/}	2,824	1,887	3,078	2,853	NA	NA	2,549	1,696	3,393	0.48	0.61	0.55	NA	NA	NA	0.78
Grays Harbor Fall ^{e/}	17,305	11,248	17,145	20,741	NA	NA	15,874	5,694	13,326	0.48	0.61	0.55	NA	NA	NA	0.78
Grays Harbor Spring	1,841	926	1,384	493	1,185	NA	932	700	1,400	NA	NA	NA	NA	NA	NA	0.78
Queets - Fall ^{d/}	5,313	2,915	2,702	2,095	NA	NA	2,546	1,250	2,500	0.48	0.61	0.55	NA	NA	NA	0.87
Queets - Sp/Su	532	704	825	484	NA	NA	655	350	700	NA	NA	NA	NA	NA	NA	0.78
Hoh - Fall ^{e/}	1,795	2,831	1,808	2,478	NA	NA	2,332	600	1,200	0.48	0.61	0.55	NA	NA	NA	0.90
Hoh Sp/Su	1,070	1,144	1,364	793	NA	NA	1,074	450	900	NA	NA	NA	NA	NA	NA	0.78
Quillayute - Fall ^{e/}	3,440	3,654	3,604	3,937	7,256	NA	4,687	1,500	3,000	0.48	0.61	0.55	NA	NA	NA	0.87
Quillayute - Sp/Su	783	871	1,097	990	1,015	NA	1,033	600	1,200	NA	NA	NA	NA	NA	NA	0.78
Hoko -Su/Fa ^{d/}	2,877	1,324	1,188	2,062	1,815	NA	1,644	425	850	0.30	0.28	0.27	NA	NA	NA	0.78
Coho																
Willapa Bay	17,086	30,667	10,878	14,920	NA	21,132	15,081	8,600	17,200	0.44	0.38	0.33	0.31	NA	0.36	0.74
Grays Harbor	21,278	38,595	26,907	49,622	NA	34,008	35,676	18,320	24,426	0.49	0.12	0.32	0.22	NA	0.32	0.65
Queets	2,028	5,156	5,232	2,631	NA	5,795	4,305	4,350	5,800	0.26	0.15	0.23	0.24	NA	0.27	0.65
Hoh	1,794	5,009	4,478	2,463	NA	2,157	2,876	1,890	2,520	0.39	0.08	0.43	0.34	NA	0.48	0.65
Quillayute Fall	2,571	9,630	7,474	6,091	6,506	7,186	6,579	4,725	6,300	0.47	0.18	0.42	0.30	NA	0.22	0.59
Juan de Fuca	3,859	8,435	5,530	5,470	NA	6,865	5,922	7,000	11,000	0.18	0.03	0.06	0.08	NA	0.09	0.60
Hood Canal	26,926	24,313	23,283	NA	NA	20,299	21,740	10,750	14,350	0.59	0.40	0.35	0.57	NA	0.42	0.65
Skagit	5,794	35,822	20,184	19,047	NA	21,434	20,198	14,875	25,000	0.63	0.20	0.09	0.49	NA	0.31	0.60
Stillaguamish	2,914	13,048	6,099	23,937	NA	16,031	13,277	6,100	10,000	0.48	0.16	0.12	0.22	NA	0.18	0.50
Snohomish	12,804	44,141	18,195	58,135	NA	34,152	33,057	31,000	50,000	0.55	0.18	0.21	0.25	NA	0.13	0.60

a/ Preliminary.

b/ Preliminary approximations based on preseason forecasts and Council adopted (preseason) fishing regulations.

c/ MSST 18,440 (20,500 as measured at Huntley Park).

d/ CWT based exploitation rates from PSC-CTC 2018 Exploitation Rate Analysis.

e/ Queets River fall Chinook CWT exploitation rates used as a proxy. Exploitation rates in the terminal fisheries will differ from those calculated for Queets fall CWTs.

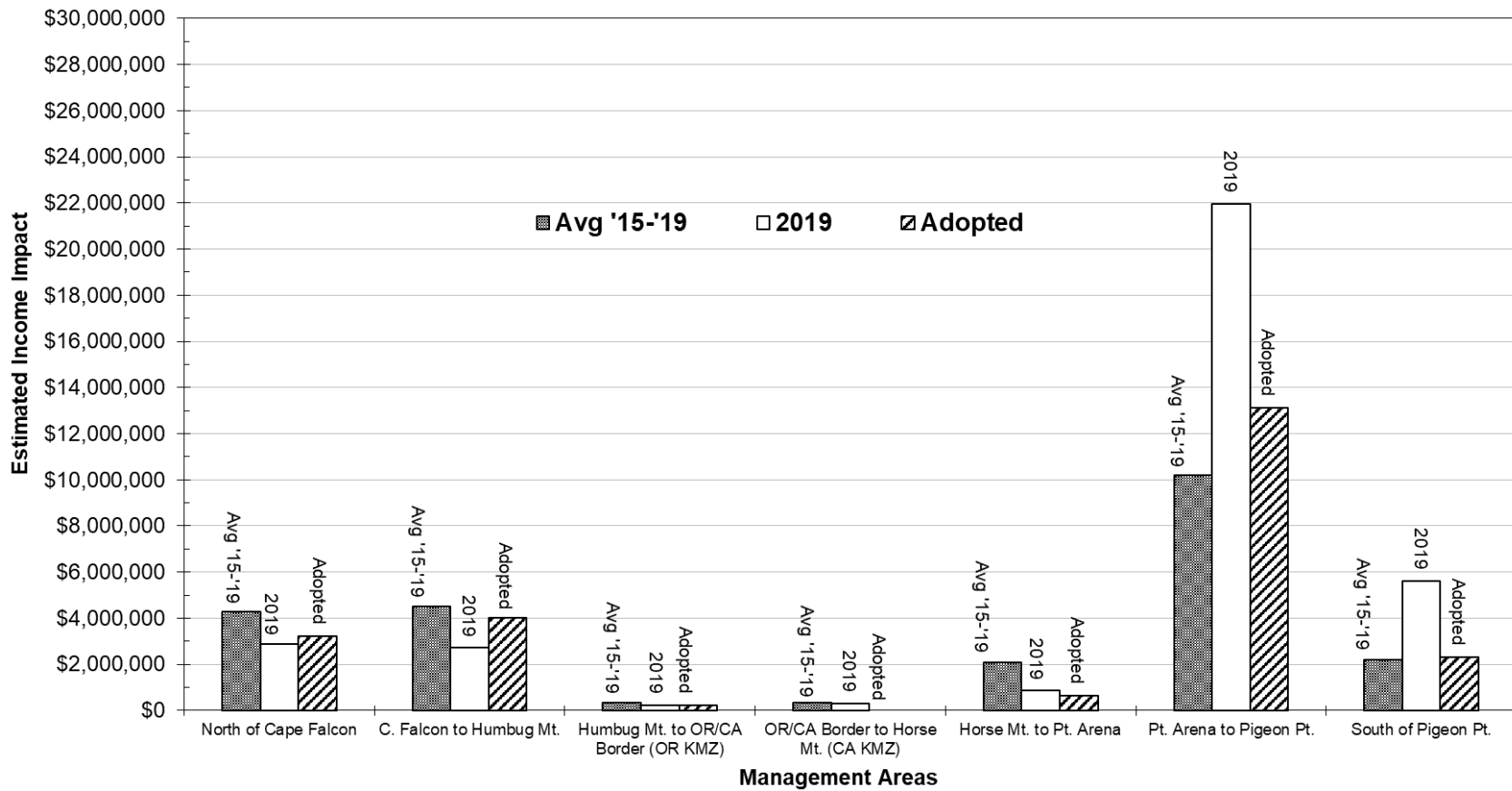


FIGURE 3. Projected coastal community personal income impacts associated with the 2020 commercial troll fishery under Council-adopted management measures compared to estimated 2019 and the 2015-2019 inflation-adjusted average (in 2019 dollars).

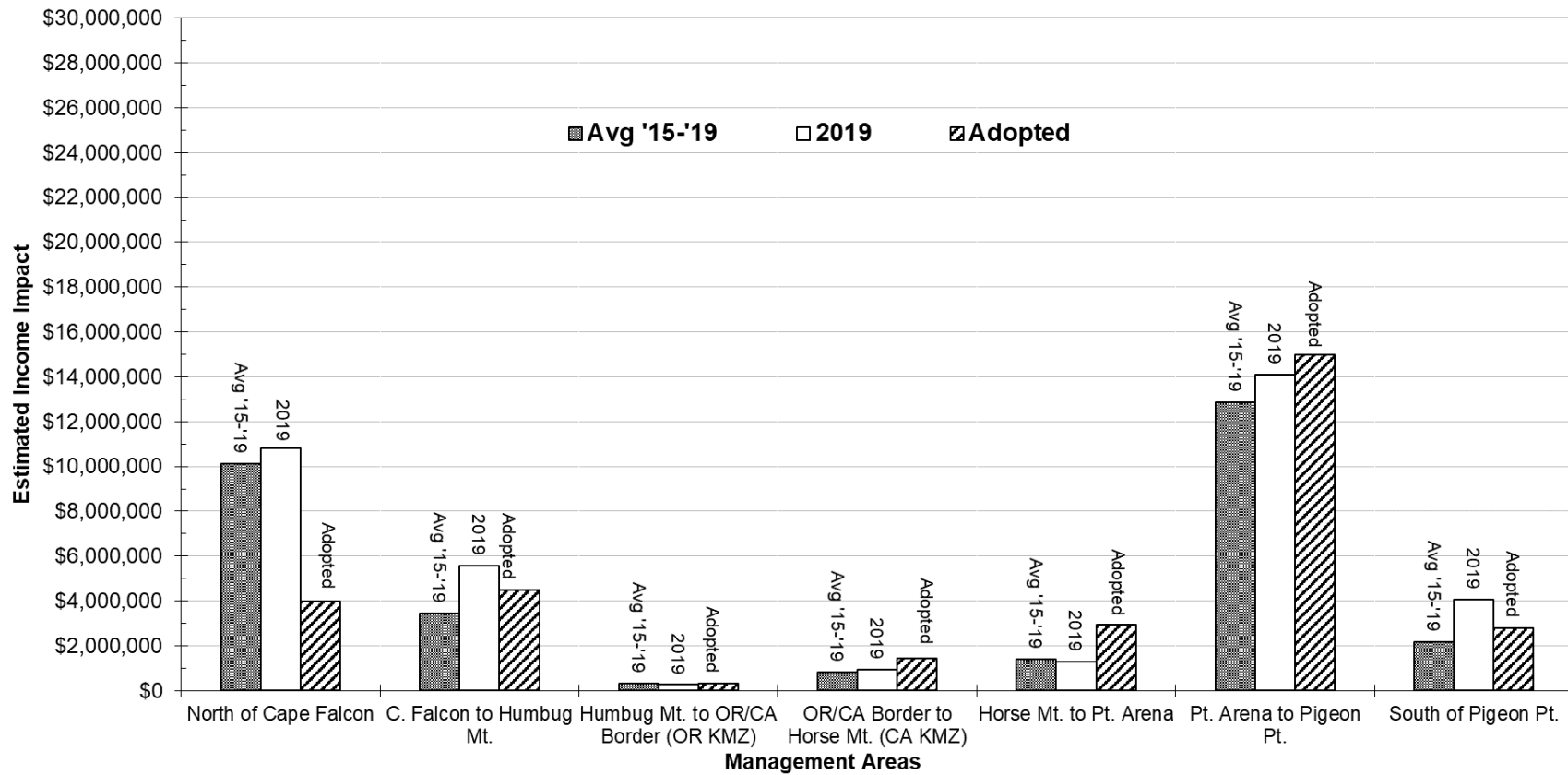


FIGURE 4. Projected coastal community personal income impacts associated with the 2020 recreational ocean salmon fishery under Council-adopted management measures compared to estimated 2019 and the 2015-2019 inflation-adjusted average (in 2019 dollars).

APPENDIX A. Assessment of impacts to stocks of FMP or ESA concern arising from three potential delayed opening scenarios for the California ocean salmon recreational fishery

Stock	Category	Parameter	Adopted seasons	Delayed opening scenarios assessed			FMP/ESA Objective	
				Open 5/16 ^{a/}	Open 6/1 ^{b/}	Open 6/16 ^{c/}		
Klamath R. Fall Chinook	FMP/ESA Objectives	Escapement	36,206	36,206	36,206	36,206	(Esc. \geq 36.2K)	
		HR	25.0%	25.0%	25.0%	25.0%	(HR \leq 25%)	
		Age-4 HR	8.8%	8.8%	8.8%	8.8%	(HR \leq 16%) ^{d/}	
	Ocean impacts	Troll-CA	4,136	4,136	4,138	4,143		
		Troll-OR	2,748	2,749	2,750	2,753		
		Troll-Total	6,884	6,886	6,887	6,895		
		Sport-CA	1,155	1,147	1,134	1,052		
		Sport-OR	267	267	267	267		
		Sport-Total	1,424	1,414	1,402	1,321		
	Catch	Ocean Catch	7,335	7,327	7,317	7,247		
		River Sport Catch	1,296	1,301	1,307	1,356		
		Tribal Catch	8,632	8,628	8,624	8,603		
		% Tribal	50%	50%	50%	50%		
	Sacramento R. Fall Chinook	FMP Objectives	Escapement	233,174	235,635	238,264	242,212	(Esc. \geq 142.0)
			HR	50.7%	50.2%	49.6%	48.8%	(HR \leq 70%)
Catch		Troll-CA	125,149	125,149	125,149	125,149		
		Troll-OR	26,128	26,128	26,128	26,128		
		Troll-Total	151,277	151,277	151,277	151,277		
		Sport-CA	45,663	42,768	39,674	35,029		
		Sport-OR	1,921	1,921	1,921	1,921		
		Sport-Total	47,584	44,689	41,595	36,950		
River Sport		41,148	41,583	42,047	42,743			
Sacramento R. Winter Chinook		ESA Guidance	Age-3 IR	16.2%	15.6%	14.9%	13.8%	(ER $<$ 20%)
SONCC Coho	ESA Guidance	Ocean ER	3.1%	- ^{e/}	- ^{e/}	3.0%	(ER \leq 13%)	

a/ California KMZ recreational season starts June 6 and remains open through August 12

b/ California KMZ recreational season starts June 6 and remains open through August 15

c/ California KMZ recreational season starts June 16 and remains open through August 29

d/ Surrogate for ESA-listed California Coastal Chinook

e/ Taken as impact neutral (or reducing) given results for the longest KMZ recreational season



FIGURE 5. Map of Pacific West Coast with major salmon ports and management boundaries. This map is for reference only and is not intended for use in navigation or fishery regulation.