# PRESEASON REPORT I
## STOCK ABUNDANCE ANALYSIS
## AND
## ENVIRONMENTAL ASSESSMENT PART 1
## FOR 2026 OCEAN SALMON FISHERY REGULATIONS

**REGULATION IDENTIFIER NUMBER 0648-BO06**

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## LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ABC | acceptable biological catch |
| ACL | annual catch limit |
| BY | brood year |
| CCC | central California coast (coho) |
| CDFW | California Department of Fish and Wildlife |
| Council | Pacific Fishery Management Council |
| CRFMP | Columbia River Fishery Management Plan |
| CWT | coded-wire tag |
| EA | Environmental Assessment |
| EEZ | exclusive economic zone (from 3-200 miles from shore) |
| EIS | Environmental Impact Statement |
| ESA | Endangered Species Act |
| ESU | evolutionarily significant unit |
| $F_{ABC}$ | exploitation rate associated with ABC |
| $F_{ACL}$ | exploitation rate associated with ACL (= $F_{ABC}$) |
| FMP | fishery management plan |
| $F_{MSY}$ | maximum sustainable yield exploitation rate |
| FNMC | Far-North-Migrating Coastal |
| $F_{OFL}$ | exploitation rate associated with the overfishing limit (= $F_{MSY}$, MFMT) |
| FONSI | Finding of No Significant Impacts |
| FRAM | Fishery Regulatory Assessment Model |
| GAM | generalized additive models |
| GLM | generalized linear model |
| ISBM | individual stock-based management |
| JA3 | January age-3 coho |
| Jack CR | Columbia River jacks (coho) |
| Jack OC | Oregon coastal and Klamath River Basin jacks (coho) |
| Jack OPI | Jack CR + Jack OC (coho) |
| KMZ | Klamath management zone (ocean zone between Humbug Mountain and latitude 40°10’ N) |
| KOHM | Klamath Ocean Harvest Model |
| KRFC | Klamath River fall Chinook |
| KRTT | Klamath River Technical Team |
| LCN | lower Columbia River natural (coho) |
| LCR | lower Columbia River (natural tule Chinook) |
| LRB | lower Columbia River bright (Chinook) |
| LRH | lower Columbia River hatchery (tule fall Chinook returning to hatcheries below Bonneville Dam) |
| LRW | lower Columbia River wild (bright fall Chinook spawning naturally in tributaries below Bonneville Dam) |
| MCB | Mid-Columbia River bright (bright hatchery fall Chinook released below McNary Dam) |
| MFMT | maximum fishing mortality threshold |
| MOC | mid-Oregon coast |
| MSA | Magnuson-Stevens Fishery Conservation and Management Act |
| MSM | mixed stock model |
| MSST | minimum stock size threshold |
| MSY | maximum sustainable yield |
| NA | not available |
| NEPA | National Environmental Policy Act |

## LIST OF ACRONYMS AND ABBREVIATIONS (continued)

| | |
|---|---|
| NMFS | National Marine Fisheries Service |
| NOC | north Oregon coast |
| NPGO | North Pacific Gyre Oscillation |
| NS1G | National Standard 1 Guidelines |
| OA3 | ocean age-3 coho |
| OCN | Oregon coast natural (coho) |
| OCNL | Oregon coast natural lake (coho) |
| OCNR | Oregon coast natural river (coho) |
| ODFW | Oregon Department of Fish and Wildlife |
| OFL | overfishing limit |
| ONI | Oceanic Niño Index |
| OPI | Oregon Production Index (coho salmon stock index south of Leadbetter Point) |
| OPIH | Oregon Production Index public hatchery |
| OPITT | Oregon Production Index Technical Team |
| OY | Optimum Yield |
| PDO | Pacific Decadal Oscillation |
| PFMC | Pacific Fishery Management Council (Council) |
| PRIH | Private hatchery |
| PSC | Pacific Salmon Commission |
| PST | Pacific Salmon Treaty |
| RER | rebuilding exploitation rate |
| RK | Rogue/Klamath (coho) |
| RMP | Resource Management Plan (for exemption from ESA section 9 take prohibitions under limit 6 of the 4(d) rule) |
| ROPI | Rogue Ocean Production Index (Chinook) |
| RRTERM | terminal area run reconstruction program |
| SAB | Select Area brights (bright fall Chinook destined for Select Area sites on the lower Columbia River) |
| $S_{ABC}$ | spawning escapement associated with ABC |
| $S_{ACL}$ | spawning escapement associated with ACL (= $S_{ABC}$) |
| SCH | Spring Creek Hatchery (tule fall Chinook returning to SCH) |
| SHM | Sacramento Harvest Model |
| SI | Sacramento Index |
| $S_{MSY}$ | MSY spawning escapement |
| $S_{OFL}$ | spawning escapement associated with the overfishing limit (= $S_{MSY}$) |
| SOC | south Oregon Coast |
| SONC | southern Oregon/northern California (Chinook) |
| SONCC | southern Oregon/northern California coast (coho) |
| SRFC | Sacramento River fall Chinook |
| SRS | Stratified Random Sampling |
| SRWC | Sacramento River winter Chinook |
| STEP | Salmon Trout Enhancement Program |
| STT | Salmon Technical Team (formerly the Salmon Plan Development Team) |
| TAC | Technical Advisory Committee (*U.S. v. Oregon*) |
| TAC | total allowable catch |
| URB | Upriver bright (naturally spawning bright fall Chinook primarily migrating past McNary Dam) |
| VSI | visual stock identification |
| WCVI | West Coast Vancouver Island |
| WDFW | Washington Department of Fish and Wildlife |

# INTRODUCTION

This is the second report in an annual series of four reports prepared by the Salmon Technical Team (STT) of the Pacific Fishery Management Council (Council) to document and help guide ocean salmon fishery management off the coasts of Washington, Oregon, and California. This report focuses on Chinook, coho, and pink salmon stocks that have been important in determining Council fisheries in recent years, and on stocks listed under the Endangered Species Act (ESA) for which NMFS has issued biological opinions addressing the effects of the fishery. This report will be formally reviewed at the Council's March 2026 meeting. This report provides 2026 salmon stock abundance forecasts, and an analysis of the impact of 2025 management measures or regulatory procedures on the projected 2026 abundance. This analysis is intended to give perspective when developing 2026 management measures.

This report constitutes the first part of an Environmental Assessment (EA) to comply with National Environmental Policy Act (NEPA) requirements for the 2026 ocean salmon management measures.

The STT will provide two additional reports prior to the beginning of the ocean salmon season to help guide the Council's selection of annual fishery management measure, Preseason Report II and Preseason Report III. They will analyze the impact of the Council's proposed alternatives and adopted fishery management recommendations, respectively. These reports will constitute the rest of the sections needed for the EA and will include additional descriptions of the affected environment, a description of the alternatives, and an analysis of the environmental consequences of the alternatives and, including cumulative effects.

Chapter I provides a summary of stock abundance forecasts. Chapters II and III provide detailed stock-by-stock analyses of abundance, a description of prediction methodologies, and accuracy of past abundance forecasts for Chinook and coho salmon, respectively. Chapter IV summarizes abundance and forecast information for pink salmon. Chapter V provides an assessment of 2025 regulations applied to 2026 abundance forecasts. Appendices provide supplementary information as follows: Appendix A provides a summary of Council stocks and their management objectives; Appendix B contains the Council's current harvest allocation schedules; and Appendix C contains pertinent data for Oregon Production Index (OPI) area coho. For NEPA purposes, Chapters I-IV of this document describe the affected environment, and Chapter V provides a description and analysis of the No-Action Alternative.

## *PURPOSE AND NEED*

The purpose of this action, development, and implementation of ocean salmon fishery management measures for the 2026,[1] is to allow fisheries to harvest surplus production of healthy natural and hatchery salmon stocks within the constraints specified under the Salmon FMP, the Pacific Salmon Treaty (PST), and measures needed to ensure consistency of fishery management with requirements for ESA-listed species (referred to in the FMP as "consultation standards"). In achieving this purpose, management measures must take into account the allocation of harvest among different user groups and port areas. Without this action, the 2025 management measures would remain in effect, and these do not consider changes in abundance of stocks in the mixed stock ocean salmon fisheries or recent modifications to the management framework. Therefore, this action is needed to ensure constraining stocks are not overharvested, and that harvest of abundant stocks can be optimized and achieve the most overall benefit to the nation.

The Salmon FMP also establishes nine more general harvest-related objectives:

[1] Annual management measures are effective beginning 16 May of the year they are implemented and generally continue through 15 May of the following year when they are replaced with the next year's measures. For ease of reference, we refer to the measures being developed for the 16 May 2026 -15 May 2027 fishing season as the 2026 management measures.

1. Establish ocean exploitation rates for commercial and recreational salmon fisheries that are consistent with requirements for stock conservation objectives and annual catch limits (ACLs), specified ESA consultation standards, and any applicable rebuilding plans.
2. Fulfill obligations to provide opportunity for tribal Indian harvest of salmon as provided in treaties with the United States, as mandated by applicable decisions of the Federal courts, and as specified in the October 4, 1993 opinion of the Solicitor, Department of Interior, with regard to federally-recognized Indian fishing rights of Klamath River Tribes.
3. Maintain ocean salmon fishing seasons supporting the continuance of established recreational and commercial fisheries, while meeting salmon harvest allocation objectives among ocean and inside recreational and commercial fisheries that are fair and equitable, and in which fishing interests shall equitably share the obligations of fulfilling any treaty or other legal requirements for harvest opportunities.
4. Minimize fishery mortalities for those fish not landed from all ocean salmon fisheries as consistent with achieving optimum yield (OY) and bycatch management specifications.
5. Manage and regulate fisheries so that the OY encompasses the quantity and value of food produced, the recreational value, and the social and economic values of the fisheries.
6. Develop fair and creative approaches to managing fishing effort; and evaluate and apply effort management systems as appropriate to achieve these management objectives.
7. Support the enhancement of salmon stock abundance in conjunction with fishing effort management programs to facilitate economically viable and socially acceptable commercial, recreational, and tribal seasons.
8. Achieve long-term coordination with the member states of the Council, Indian tribes with federally-recognized fishing rights, Canada, the North Pacific Fishery Management Council, Alaska, and other management entities which are responsible for salmon habitat or production. Manage consistent with the PST and other international treaty obligations.
9. In recommending seasons, to the extent practicable, promote the safety of human life at sea.

These objectives provide "sideboards" for setting management measures necessary to implement the Salmon FMP, which is consistent with the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including the 10 National Standards set forth in the MSA.

Implementation of 2026 management measures will allow fisheries to harvest surplus production of healthy natural and hatchery salmon stocks within the constraints specified under the Salmon FMP and consistent with the MSA.

The MSA includes requirements to end and prevent overfishing through specification of overfishing limits (OFL), acceptable biological catch (ABC), ACLs and accountability measures (AMs). Because OFLs, ABCs, and ACLs are based on annual abundance forecasts, Preseason Report I also specifies OFLs, ABCs, and ACLs for 2026 fisheries.

# CHAPTER I: DESCRIPTION OF THE AFFECTED ENVIRONMENT

The action area for this proposed action is the exclusive economic zone (EEZ) of the United States, three to 200 nautical miles, off the West Coast of the U.S. (California, Oregon, and Washington).

The affected environment relevant to establishing the 2026 ocean salmon fishery management measures consists of the following components:

- Target Species – Non-ESA-listed Chinook, coho, and pink salmon
- ESA-listed salmon species that are incidentally caught in the ocean salmon fisheries
- Socioeconomic aspects of coastal communities, federally-recognized Tribes, and states
- Other non-target fish species – Pacific Halibut, groundfish
- Marine mammals – pinnipeds, killer whales
- Seabirds
- Biodiversity and ecosystem function
- Ocean and coastal habitats, ESA critical habitat, and Essential Fish Habitat (EFH)
- Public health or safety
- Unique characteristics of the geographic area
- Cultural, scientific, or historical resources such as those eligible for listing in the National Register of Historic Places

A description of the historical baseline for the components of the affected environment is presented in the *Review of 2025 Ocean Salmon Fisheries* (PFMC 2026). The current status (2026 ocean abundance forecasts) of the environmental components expected to be affected by the 2026 ocean salmon fisheries regulation alternatives (FMP salmon stocks, including those listed under the ESA) are described in this report (Part 1 of the 2026 salmon EA). The *Review of 2025 Ocean Salmon Fisheries* (PFMC 2026) provides a historical description of the salmon fishery affected environment, including stock status and socioeconomic impacts, and represents the current status of the socioeconomic component of the affected environment.

The 2025 ocean salmon fisheries specifications and management measures were assessed in the 2025 NEPA process for ocean salmon regulations (*Preseason Reports II* (PFMC 2025b) and *Preseason Report III* (PFMC 2025c). In those analyses, the proposed management measures were determined to have no significant impacts on the affected environment.

The 2026 No-Action Alternative is the same as the 2025 action. For most components of the affected environment, there have not been changes between 2025 and 2026 that would result in effects on those components being significant in 2026. This document, therefore, does not reanalyze the No-Action Alternative's impact on most components of the affected environment. This document does, however, include analysis of the impacts of the No-Action Alternative on salmon stocks identified in the FMP, the component of the environment for which conditions have changed such that the effects in 2026 are different.

The component of the affected environment that is described in this document consists only of the salmon stocks identified in the FMP (Appendix A). The 2026 forecast abundance of the FMP salmon stocks represents this component of the affected environment. The surviving stock after fishery-related mortality is generally referred to as spawning escapement (S), and the proportion of the stock that succumbs to fishing-related mortality is generally referred to as the exploitation rate (F). These are the metrics that constitute conservation objectives for FMP stocks, and by which effects of the alternatives to this part of the affected environment are evaluated. Thus, application of management measures (alternatives) to the abundance forecasts (affected environment) results in projected exploitation rates and spawning escapements (effects).

A description of the other components of the affected environment considered for 2026 ocean salmon fishery regulation alternatives, including socioeconomic components, and updated additional information on the biological components of the environment, will be presented in Preseason Report II, to be issued after the March Council meeting.

## 1.1 ABUNDANCE FORECASTS

Abundance forecasts for 2026 are summarized for key Chinook and coho salmon stocks in Tables I-1 and I-2, respectively. A cursory comparison of preseason forecast and postseason abundance estimates for selected stocks is presented in Figures II-2, II-3, II-4 and III-1. More detailed analyses of this subject are covered in Chapters II (Chinook) and III (coho). Information on pink salmon abundance and forecasts is contained in Chapter IV. Council Salmon FMP conservation objectives are presented in Appendix A; allocation objectives are presented in Appendix B.

In addition to the key stocks with abundance forecasts listed in Tables I-1 and I-2, Council management decisions for the 2026 ocean salmon fishing seasons may be constrained by other stocks, such as some of those listed under the ESA or subject to Pacific Salmon Commission (PSC) agreements, which may not have abundance forecasts made, or do not have abundance forecasts available in time for inclusion in this report. These include the following Evolutionarily Significant Units (ESUs): Central Valley Spring Chinook, California Coastal Chinook, Lower Columbia River (LCR) natural Chinook (tule component), Snake River Fall Chinook; Central California Coast coho, Southern Oregon/Northern California Coast coho, and Interior Fraser (including Thompson River) coho.

## 1.2 ACCEPTABLE BIOLOGICAL CATCH, ANNUAL CATCH LIMITS, AND OVERFISHING LIMITS

The Salmon FMP includes specifications of ABC, ACLs, OFLs, and Scientific and Statistical Committee (SSC) recommendations for ABC.

Currently, ABC and ACLs specifications are required for three salmon stocks; Sacramento River fall Chinook (SRFC), which serve as an indicator stock for the Central Valley Fall Chinook complex, Klamath River fall Chinook (KRFC), which serve as an indicator stock for the Southern Oregon/Northern California Chinook complex, and Willapa Bay natural coho. Other stocks in the FMP are not required to have ACLs either because they are components of these two stock complexes, are ESA-listed, are hatchery stocks, or are managed under an international agreement.

ABCs and ACLs are not specified for stocks that are managed under an international agreement as there is a statutory exception in the MSA to the requirement for ACLs, and the National Standard 1 Guidelines (NS1Gs) state that ABCs are not required if stocks meet this international exception. The NS1Gs allow the flexibility to consider alternative approaches for specifying ACLs for stocks with unusual life history characteristics like Pacific salmon, and particularly for species listed under the ESA and hatchery stocks. For hatchery stocks, broodstock goals serve as conservation objectives rather than specifying ACLs. For ESA-listed stocks, consultation standards describe necessary controls to ensure fisheries avoid jeopardizing the listed species.

Preseason OFLs are determined for all non-ESA-listed and non-hatchery stocks with an estimate of $F_{MSY}$ (or Maximum Fishing Mortality Threshold, MFMT) and sufficient information available to make abundance forecasts.

### 1.2.1 Acceptable Biological Catch

For salmon, ABC is defined in terms of spawner escapement ($S_{ABC}$), which is determined annually based on stock abundance in spawner equivalent units (N) and the exploitation rate $F_{ABC}$.

$S_{ABC}$=N x (1 - $F_{ABC}$)

The ABC control rule defines $F_{ABC}$ as a fixed exploitation rate reduced from $F_{MSY}$ to account for scientific uncertainty. The degree of the reduction in F between $F_{ABC}$ and $F_{MSY}$ depends on whether $F_{MSY}$ is directly estimated (tier 1 stock) or a proxy value is used (tier 2 stock). For tier 1 stocks, $F_{ABC}$ equals $F_{MSY}$ reduced by five percent. For tier 2 stocks, $F_{ABC}$ equals $F_{MSY}$ reduced by ten percent.

Tier-1: $F_{ABC} = F_{MSY} \times 0.95$.
Tier-2: $F_{ABC} = F_{MSY} \times 0.90$.

### 1.2.2 Annual Catch Limit

ACLs are also defined in terms of spawner escapement ($S_{ACL}$) based on N and the corresponding exploitation rate ($F_{ACL}$), where the exploitation rate is a fixed value that does not change on an annual basis.

$F_{ACL}$ is equivalent to $F_{ABC}$ and

$S_{ACL}$ = N x (1-$F_{ACL}$),

which results in $S_{ACL} = S_{ABC}$ for each management year.

During the annual preseason salmon management process, $S_{ACL}$ is estimated using the fixed $F_{ACL}$ exploitation rate and the preseason forecast of N. Thus, fishery management measures must result in an expected spawning escapement greater than or equal to this preseason estimate of $S_{ACL}$.

### 1.2.3 Overfishing Limit

For salmon, OFL is defined in terms of spawner escapement ($S_{OFL}$), which is consistent with the common practice of using spawner escapement to assess stock status for salmon. $S_{OFL}$ is determined annually based on stock abundance, in spawner equivalent units (N) and the exploitation rate $F_{OFL}$.

$F_{OFL}$ is defined as being equal to $F_{MSY}$ (or MFMT) and

$S_{OFL}$ = N x (1 - $F_{MSY}$).

## *1.3 STATUS DETERMINATION CRITERIA*

The FMP includes status determination criteria (SDC) for overfishing, approaching an overfished condition, overfished, not overfished-rebuilding, and rebuilt. These criteria are:

- Overfishing occurs when a single year exploitation rate exceeds the MFMT, which is based on the maximum sustainable yield exploitation rate ($F_{MSY}$);
- Approaching an overfished condition occurs when the geometric mean of the two most recent postseason estimates of spawning escapement, and the current preseason forecast of spawning escapement, is less than the minimum stock size threshold (MSST);
- Overfished status occurs when the most recent 3-year geometric mean spawning escapement is less than the MSST;
- Not overfished-rebuilding status occurs when a stock has been classified as overfished and has not yet been rebuilt, and the most recent 3-year geometric mean spawning escapement is greater than the MSST but less than $S_{MSY}$;

- A stock is rebuilt when the most recent 3-year geometric mean spawning escapement exceeds $S_{MSY}$.

Comparison of stock status to criteria for overfishing, overfished, not overfished-rebuilding, and rebuilt were reported in the annual SAFE document, *Review of 2025 Ocean Salmon Fisheries* (PFMC 2026). Approaching an overfished condition relies on current year preseason forecasts and Council adopted fishing regulations for the upcoming season to calculate projected spawning escapement. In this report, because the actual regulations for the upcoming season are not yet known, the calculations are based on preseason forecasts and Council-adopted regulations from the year prior. Thus, the stock status in this report is described as *at risk* of approaching an overfished condition. Once the regulations for the upcoming season are adopted and spawning escapement is projected, the status description will be updated and provided in the Preseason III report. All SDC rely on the most recent estimates available, which in some cases may be a year or more in the past because of incomplete broods or data availability; however, some status descriptions reported in the SAFE document may be updated if more recent spawning escapement or exploitation rate estimates become available between the time the SAFE document and this document are published.

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 1 of 3)

| Production Source and Stock or Stock Group | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | Methodology for 2026 Prediction and Source |
|---|---|---|---|---|---|---|---|
| **Sacramento River** | | | | | | | |
| Fall (Sacramento Index) | 271.0 | 396.5 | 169.8 | 213.6 | 165.7 | 392.3 | Log-log regression of the Sacramento Index on jack escapement from the previous year, accounting for lag-1 autocorrelated errors. STT. |
| Winter (age-3 absent fishing) | 9.1 | 6.0 | 4.5 | 1.1 | 4.5 | 9.9 | Gaussian process model applied to a time series of the SRWC age-3 escapement absent fishing. NMFS. |
| **Klamath River** (Ocean Abundance) | | | | | | | |
| Fall | 181.5 | 200.1 | 103.8 | 180.7 | 82.7 | 176.2 | Linear regression analysis of age-specific ocean abundance estimates on river runs of same cohort. STT. |
| **Oregon Coast** | | | | | | | |
| North and South/Local Migrating | -- | -- | -- | -- | -- | -- | None. |
| **Columbia River** (Ocean Escapement) | | | | | | | |
| Cowlitz Spring | 1.8 | 4.1 | 9.0 | 4.7 | 13.7 | 9.3 | Cowlitz, Kalama, and Lewis: Age-specific linear regressions of cohort returns in previous run years. WDFW. |
| Kalama Spring | 2.2 | 2.0 | 2.4 | 1.9 | 3.0 | 3.3 | |
| Lewis Spring | 2.4 | 2.4 | 4.7 | 3.4 | 3.2 | 5.0 | |
| Sandy Spring | 5.3 | 5.6 | 7.8 | 7.7 | 7.3 | 6.4 | Recent 3-year average. ODFW. |
| Willamette Spring | 50.1 | 51.2 | 71.0 | 48.7 | 51.2 | 43.7 | Age-specific linear regressions of cohort returns in previous run years. Forecast includes adult fish only. ODFW. |
| Upriver Spring [a/] | 75.2 | 122.9 | 198.6 | 121.0 | 122.5 | 147.3 | Columbia River Upriver Spring and Summer Chinook: DLM ensemble model |
| Upriver Summer[b/] | 77.6 | 57.5 | 84.8 | 53.0 | 38.0 | 41.0 | |
| LRW Fall | 20.0 | 10.8 | 8.6 | 10.5 | 14.2 | 15.8 | ARIMA-based MAPE weighted ensemble forecast. |
| LRH Fall | 73.1 | 73.0 | 77.1 | 85.5 | 121.5 | 118.6 | |
| SCH Fall | 46.8 | 91.2 | 136.1 | 129.8 | 184.7 | 123.4 | |
| MCB Fall | 86.2 | 78.9 | 52.6 | 63.4 | 83.3 | 111.5 | |
| URB Fall | 354.2 | 230.4 | 272.4 | 258.3 | 313.4 | 281.6 | |

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 2 of 3)

| Production Source and Stock or Stock Group | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | Methodology for 2026 Prediction and Source |
|---|---|---|---|---|---|---|---|---|
| **Washington Coast** | | | | | | | | |
| Willapa Bay Fall | Natural | 3.9 | 3.1 | 2.8 | 3.5 | 2.3 | 2.8 | Return/spawner adjusted for recent model performance. |
| | Hatchery | 30.5 | 30.1 | 27.5 | 27.3 | 33.4 | 25.3 | Return/spawner adjusted for recent model performance. |
| Grays Harbor Fall | Natural | 15.5 | 17.9 | 15.0 | 14.3 | 14.2 | 13.0 | Combination of geometric mean of recent year returns and linear relationships of sibling recruits per spawner. |
| | Hatchery | 7.6 | 8.6 | 5.9 | 5.3 | 3.9 | 2.6 | Recent 5-year geometric mean of returns per release. |
| Quinault Spring/Summer | Natural | NA | NA | NA | NA | NA | 0.1 | |
| | Hatchery | NA | NA | NA | NA | NA | NA | |
| Quinault Fall | Natural | 6.0 | 3.2 | 4.0 | 4.3 | 4.1 | 4.4 | Recent 5-year geometric mean for age 3-5 returns and recent 5-year average return for age 6. |
| | Hatchery | 4.9 | 5.6 | 7.6 | 3.4 | 4.6 | 5.4 | Recent 5-year mean terminal return rates (return/smolt release) for age 3-6 adult returns adjusted by brood performance. |
| Queets Spring/Sum | Natural | 0.6 | 0.6 | 0.4 | 0.4 | 0.6 | 0.7 | Recent 3-year geometric mean terminal run size. |
| Queets Fall | Natural | 4.3 | 5.3 | 4.3 | 2.6 | 3.3 | 4.3 | Recent 5-year mean return/spawner rates adjusted by brood performance. |
| | Hatchery | 0.6 | 0.5 | 0.8 | 0.4 | 0.6 | 0.5 | Recent 5-year return/smolt release adjusted by brood performance. |
| Hoh Spring/Summer | Natural | 1.0 | 0.7 | 1.0 | 1.1 | 1.2 | 1.5 | 5-year mean recruit/spawner adjusted by previous performance. |
| Hoh Fall | Natural | 2.6 | 3.4 | 2.6 | 3.5 | 2.5 | 3.1 | 5-year mean recruit/spawner adjusted by previous performance. |
| Quillayute Spring/Summer | Hatchery | 2.6 | 3.0 | 2.8 | 2.5 | 2.4 | 3.5 | Recent 5-year mean return/spawner, adjusted by previous year brood performance. |
| Quillayute Sum/Fall | Natural | 9.6 | 8.8 | 11.3 | 10.1 | 8.1 | 9.0 | Recent 5-year mean return/spawner, adjusted by previous year brood performance. |
| Hoko[c/] | Natural | 1.3 | 0.9 | 2.8 | 3.9 | 1.9 | 1.2 | Escapement without fishing, includes supplemental. Sibling regressions using data from return years 1988-2023. |
| *North Coast Totals* | | | | | | | | |
| *Spring/Summer* | *Natural* | *1.5* | *1.3* | *1.4* | *1.5* | *1.8* | *2.2* | |
| *Fall* | *Natural* | *22.5* | *20.7* | *22.1* | *20.5* | *18.0* | *20.6* | |
| *Spring/Summer* | *Hatchery* | *2.6* | *3.0* | *2.8* | *2.5* | *2.4* | *3.5* | |
| *Fall* | *Hatchery* | *5.5* | *6.1* | *8.4* | *3.8* | *5.1* | *5.9* | |

TABLE I-1. Preseason adult Chinook salmon stock forecasts in thousands of fish. (Page 3 of 3)

| Production Source and Stock or Stock Group | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | Methodology for 2026 Prediction and Source |
|---|---|---|---|---|---|---|---|---|
| **Puget Sound summer/fall**[d/] | | | | | | | | |
| Nooksack/Samish | Hatchery | 18.9 | 28.1 | 41.2 | 40.9 | 53.7 | 55.0 | Three year average return rate. |
| East Sound Bay | Hatchery | 0.6 | 0.4 | 0.2 | 0.2 | 1.0 | 1.5 | Three year average return rate. |
| Skagit | Natural | 10.5 | 12.5 | 12.2 | 10.4 | 9.7 | 11.9 | Natural: Hierarchical Bayesian model to estimate the spawner-recruit dynamics. Hatchery: One year ahead forecasts generated using Chinook run sizes and GAM and ARIMA models. |
| | Hatchery | 0.5 | 0.5 | 0.5 | 0.6 | 0.5 | 0.6 | |
| Stillaguamish | Natural | 0.9 | 0.9 | 1.2 | 0.9 | 1.1 | 1.3 | Generalized linear regressions. |
| Snohomish | Natural | 2.9 | 2.4 | 3.4 | 2.7 | 2.9 | 3.5 | Age specific forecast models (i.e. sibling regression models, naive, linear with environmental variables). |
| | Hatchery | 6.1 | 6.0 | 7.5 | 8.4 | 11.4 | 9.7 | Age specific forecast models (i.e. sibling regression models, naive, linear with environmental variables). |
| Tulalip | Hatchery | 5.8 | 7.7 | 5.5 | 5.9 | 4.9 | 6.3 | Suite of naïve and sibling regression models for individual age components. |
| South Puget Sound | Natural | 7.0 | 6.9 | 7.0 | 7.3 | 8.5 | 8.8 | Natural: Lake Washington; 3-yr avg recruit per spawner for Sammamish River ages 3-5 and 4-yr avg recruit per spawner for Cedar River ages 3-5. Green; 5-yr average return rate using 2016-2020 brood years for age 4, and recent 3-yr average return rate for ages 3 and 5. Puyallup; GAM prediction for age 3 returns per spawner, GAM for age 4, and GAM for age 5. Nisqually; 3-yr smolt/adult average age3, recruit per spawner age 4, and recruit per spawner age 5. Hatchery: Variety of recent year average return rates or sibling relationships. |
| | Hatchery | 78.8 | 90.3 | 90.4 | 90.5 | 94.4 | 102.0 | |
| Hood Canal | Natural | 5.7 | 5.4 | 3.2 | 4.3 | 5.2 | 5.7 | Includes hatchery strays to spawning grounds in Skokomish River. Brood 2021 fingerling lbs released from WDFW facilities in 2022 multiplied by the recent 5-yr average of estimated terminal area return rates. Area 12B derived by 5-year average return (2021-2025). |
| | Hatchery | 64.1 | 51.9 | 53.6 | 56.3 | 54.5 | 65.8 | Brood 2021 fingerling lbs released from WDFW facilities in 2022 multiplied by the recent 5-yr average of estimated terminal area return rates. |
| Strait of Juan de Fuca Including Dungeness spring run | Natural | 5.5 | 5.0 | 3.7 | 4.3 | 5.2 | 5.3 | Natural and hatchery. Elwha: mean adult survival / recruitment rate applied to brood year releases for hatchery, unmarked fraction in spawning areas applied to SONAR spawner abundance for wild. Dungeness: all year mean return rates adjusted by previous brood perfomance. |

a/ Since 2005, the upriver spring Chinook run includes Snake River summer Chinook.

b/ Since 2005, the upriver summer Chinook run includes only upper Columbia summer Chinook, and not Snake River summer Chinook.

c/ Expected spawning escapement without fishing.

d/ Unless otherwise noted, Puget Sounds forecasts are in units of terminal run size.

TABLE I-2. Preseason adult coho salmon stock forecasts in thousands of fish. (Page 1 of 2)

| Production Source and Stock or Stock Group | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | Methodology for 2026 Prediction and Source |
|---|---|---|---|---|---|---|---|---|
| **OPI Area Total Abundance** (California, Oregon Coasts, and Columbia River) | | 1,732.9 | 1,225.9 | 1,135.7 | 636.3 | 782.6 | 737.9 | Abundance of all OPI components based on post-season coho FRAM runs; prior to 2008 only fishery impacts south of Leadbetter Point were used (traditional OPI accounting). See Chapter III for details. |
| OPI Public | Hatchery | 1607.9 | 1003.5 | 896.9 | 403.1 | 493.6 | 519.3 | OPIH: ARIMA-based MAPE weighted ensemble forecast. Columbia early/late and Coastal proportions based on 10-yr average proportion; Coastal N/S proportions based on smolts. |
| Columbia River Early | | 1014.0 | 592.5 | 481.8 | 227.5 | 338.1 | 322.7 | |
| Columbia River Late | | 576.0 | 404.7 | 404.3 | 173.6 | 141.6 | 188.5 | |
| Coastal N. of Cape Blanco | | 6.4 | 1.9 | 3.0 | 0.6 | 5.2 | 2.5 | |
| Coastal S. of Cape Blanco | | 11.5 | 4.4 | 7.8 | 1.4 | 8.7 | 5.5 | |
| Lower Columbia River (LCN) | Natural | 39.2 | 65.7 | 45.5 | 87.8 | 72.0 | 101.8 | Oregon: recent three year average return; Washingtion: natural smolt production multiplied by 2023 brood marine survival rate. Abundance is subset of early/late hatchery abundance above. |
| Oregon Coast (OCN) | Natural | 125.0 | 222.4 | 238.8 | 233.2 | 289.0 | 218.6 | Rivers: Generalized additive model (GAM) relating ocean recruits to parental spawners and marine environmental variables. See text in Chapter III for details. Lakes: recent three year average abundance. |
| **Washington Coast** | | | | | | | | |
| Willapa | Natural | 19.0 | 35.8 | 42.7 | 29.5 | 28.0 | 26.5 | Washington Coast stocks: A variety of methods were used, primarily based on smolt production and survival. See text in Chapter III for details. |
| | Hatchery | 61.6 | 74.7 | 111.0 | 91.5 | 93.7 | 100.6 | |
| Grays Harbor | Natural | 44.8 | 120.8 | 103.2 | 74.9 | 62.2 | 71.9 | |
| | Hatchery | 31.7 | 78.3 | 111.4 | 68.2 | 87.8 | 93.3 | |
| Quinault | Natural | 15.0 | 19.4 | 23.6 | 25.3 | 21.1 | 23.6 | |
| | Hatchery | 24.6 | 42.7 | 30.6 | 34.7 | 37.3 | 36.5 | |
| Queets | Natural | 3.9 | 18.3 | 12.5 | 12.8 | 9.0 | 10.4 | |
| | Hatchery | 11.8 | 22.2 | 14.9 | 18.9 | 9.7 | 21.1 | |
| Hoh | Natural | 3.0 | 4.7 | 6.6 | 4.9 | 5.4 | 6.5 | |

TABLE I-2. Preseason adult coho salmon stock forecasts in thousands of fish. (Page 2 of 2)

| Production Source and Stock or Stock Group | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | Methodology for 2026 Prediction and Source |
|---|---|---|---|---|---|---|---|---|
| Quillayute Fall | Natural | 7.5 | 12.5 | 13.5 | 10.2 | 10.9 | 12.9 | For all Washington Coast stocks: A variety of methods were used, primarily based on smolt production and survival. See text in Chapter III for details. |
| | Hatchery | 15.1 | 20.3 | 19.1 | 10.3 | 13.4 | 13.0 | |
| Quillayute Summer | Natural | 0.3 | 0.9 | 1.6 | 0.4 | 0.3 | 0.5 | |
| | Hatchery | 3.4 | 4.6 | 3.9 | 2.3 | 2.9 | 2.5 | |
| North Coast Independent Tributaries | Natural | 4.7 | 18.0 | 13.5 | 4.9 | 9.4 | 10.0 | |
| | Hatchery | 0.1 | 0.1 | 11.8 | 9.0 | 3.3 | 4.4 | |
| *WA Coast Total* | *Natural* | *98.4* | *230.5* | *217.2* | *162.8* | *146.4* | *162.3* | |
| | *Hatchery* | *148.2* | *243.0* | *302.7* | *234.9* | *248.1* | *271.4* | |
| **Puget Sound** | | | | | | | | |
| Strait of Juan de Fuca | Natural | 6.7 | 7.3 | 15.6 | 19.7 | 14.0 | 9.8 | For all Puget Sound stocks: A variety of methods were used, primarily based on smolt production and survival. See text in Chapter III and Joint WDFW and tribal annual reports on Puget Sound Coho Salmon Forecast Methodology for details. |
| | Hatchery[a/] | 12.5 | 12.7 | 21.8 | 22.6 | 18.3 | 14.2 | |
| Nooksack-Samish | Natural | 35.3 | 36.0 | 29.5 | 35.1 | 29.5 | 35.5 | |
| | Hatchery | 54.6 | 73.8 | 66.6 | 72.3 | 58.9 | 87.2 | |
| Skagit | Natural | 58.4 | 80.4 | 43.1 | 63.4 | 66.3 | 159.7 | |
| | Hatchery | 22.0 | 21.3 | 21.1 | 27.3 | 37.2 | 43.4 | |
| Stillaguamish | Natural | 26.8 | 24.9 | 30.2 | 30.8 | 27.5 | 37.9 | |
| | Hatchery | 4.0 | 1.9 | 1.7 | 0.9 | 1.2 | 0.0 | |
| Snohomish | Natural | 60.0 | 64.2 | 76.5 | 71.6 | 59.0 | 75.8 | |
| | Hatchery | 29.9 | 22.6 | 64.0 | 34.7 | 76.2 | 47.2 | |
| South Sound | Natural | 27.5 | 31.0 | 58.3 | 38.1 | 41.6 | 49.1 | |
| | Hatchery | 192.7 | 208.5 | 218.8 | 201.9 | 213.8 | 247.0 | |
| Hood Canal | Natural | 28.8 | 20.2 | 37.9 | 36.5 | 20.0 | 21.0 | |
| | Hatchery | 55.7 | 61.4 | 74.8 | 67.2 | 63.8 | 69.5 | |
| *Puget Sound Total* | *Natural* | *243.5* | *264.0* | *291.2* | *295.3* | *257.9* | *388.8* | |
| | *Hatchery* | *371.4* | *402.3* | *468.8* | *426.9* | *469.5* | *508.4* | |

a/ Since 2026, Strait of Juan de Fuca hatchery includes Hoko hatchery coho.

# CHAPTER II: AFFECTED ENVIRONMENT - CHINOOK SALMON ASSESSMENT

## *2.1 CHINOOK STOCKS SOUTH OF CAPE FALCON*

### 2.1.1 Sacramento River Fall Chinook

The SRFC stock comprises a large proportion of the Chinook spawners returning to Central Valley streams and hatcheries. SRFC is designated as the indicator stock for the Central Valley fall Chinook stock complex, which was established under FMP Amendment 16 to facilitate setting and assessing compliance with ABC and ACLs, as required by the 2006 revision of the MSA. The Sacramento Index (SI) is the aggregate-age index of adult SRFC ocean abundance.

#### *Predictor Description*

The SI is the sum of (1) adult SRFC ocean fishery harvest south of Cape Falcon, OR between September 1 and August 31, (2) adult SRFC impacts from non-retention ocean fisheries when they occur, (3) the recreational harvest of adult SRFC in the Sacramento River Basin, and (4) the SRFC adult spawner escapement (Table II-1, Figure II-1).

The SI forecasting approach uses jack escapement estimates to predict the SI and accounts for autocorrelated errors. In practice, this means that if, in the previous year, the modeled SI value (line in Figure II-2) was larger than the SI postseason estimate for that year, the current year forecast is adjusted downward to account for that error. Conversely, if the modeled SI value in the previous year was less than the postseason estimate of the SI for that year, the current year SI forecast would be adjusted upward to compensate for that error.

The forecast of the log-transformed SI was made using the model

$$\log\mathrm{SI}_t = \beta_0 + \beta_1 \log\mathrm{J}_{t-1} + \rho\varepsilon_{t-1},$$

where $\log\mathrm{SI}_t$ and $\log\mathrm{J}_{t-1}$ are log-transformed SI and jack escapement values, respectively; $t$ is the year for which the SI is being forecast; $\beta_0$ is the intercept; $\beta_1$ is the slope; $\rho$ is the autocorrelation coefficient; and $\varepsilon_{t-1}$ is the difference between the modeled value of the log SI for year $t-1$ and $(\beta_0 + \beta_1 \log \mathrm{J}_{t-2})$. The $\log\mathrm{SI}_t$ is then back-transformed to the arithmetic scale

$$\mathrm{SI}_t = \mathrm{e}^{\log \mathrm{SI}_t}.$$

A more detailed description of the general forecast approach can be found in Appendix E of the *2014 Preseason Report I* (PFMC 2014).

#### *Predictor Performance*

The performance of past SI forecasts is displayed graphically in Figure II-4. For 2025, the preseason forecast of the SI (165,655) was 94 percent of the postseason estimate (176,417).

A control rule, adopted as part of Amendment 16 to the salmon FMP, is used annually to specify the maximum allowable exploitation rate on SRFC (Appendix A, Figure A-1). The allowable exploitation rate is determined by the predicted number of potential adult spawners in the absence of fisheries, which is defined for SRFC as the forecast SI. The FMP allows for any ocean and river harvest allocation that meets the exploitation rate constraints defined by the control rule. The regulations adopted in 2025 were expected to result in 147,733 hatchery and natural area adult spawners and an exploitation rate of 10.8 percent.

Postseason estimates of these quantities were 164,763 hatchery and natural area adult spawners and an exploitation rate of 6.6 percent (Table II-1).

### *Stock Forecast and Status*

Sacramento Index forecast model parameters were estimated from SI data for years 1983-2025 and jack escapement data for years 1982-2024. A total of 65,369 SRFC jacks were estimated to have escaped to Sacramento River basin hatcheries and natural spawning areas in 2025. This jack escapement and the estimated parameters

$\beta_0 = 7.4653076,$
$\beta_1 = 0.5448615,$
$\rho = 0.7884206,$
$\epsilon_{t-1} = -0.7949024,$
$\sigma_2 = 0.1418211,$

result in a 2026 SI forecast of 392,349.

Figure II-2 graphically displays the SI forecast. The model fit (line in Figure II-2) was higher than the 2025 postseason estimate of the SI. As a result, the 2026 SI forecast value is adjusted downward from the fitted model.

The forecast SI applied to the SRFC control rule (Appendix A, Figure A-1) results in an allowable exploitation rate of 52.0 percent which produces, in expectation, 188,328 hatchery and natural area adult spawners. Therefore, fisheries impacting SRFC must be crafted to achieve, in expectation, a minimum of 188,328 adult spawners in 2026.

### *OFL, ABC, and ACL*

The OFL, ABC, and ACL are defined in terms of spawner escapement ($S_{OFL}$, $S_{ABC}$, and $S_{ACL}$) and are calculated using potential spawner abundance forecasts and established exploitation rates. For SRFC, $F_{MSY}$ = 0.58. The SRFC $F_{MSY}$ proxy of 0.58 was adopted by the Council in November 2024, following the 2024 Methodology Review. The OFL for SRFC is $S_{OFL} = 392{,}349 \times (1-0.58) = 164{,}787$. Because SRFC is a Tier-2 stock, $F_{ABC} = F_{MSY} \times 0.90 = 0.52$, and $F_{ACL} = F_{ABC}$. The ABC for SRFC is $S_{ABC} = 188{,}328$, with $S_{ACL} = S_{ABC}$. These preseason estimates will be recalculated with postseason abundance estimates (when available) to assess ACL and OFL compliance.

## 2.1.2 Sacramento River Winter Chinook

ESA-listed endangered Sacramento River winter Chinook salmon (SRWC) are harvested incidentally in ocean fisheries, primarily off the central California coast. A two-part consultation standard for endangered SRWC was first implemented in 2012 and later updated in 2018.

The first component of the consultation standard is the season and size limit provisions that have been in place since the 2004 Biological Opinion. These provisions state that the recreational salmon fishery between Point Arena and Pigeon Point shall open no earlier than the first Saturday in April and close no later than the second Sunday in November. The recreational salmon fishery between Pigeon Point and the U.S. – Mexico Border shall open no earlier than the first Saturday in April and close no later than the first Sunday in October. The minimum size limit shall be at least 20 inches total length. The commercial salmon fishery between Point Arena and the U.S. – Mexico border shall open no earlier than May 1 and close no later than September 30, with the exception of an October fishery conducted Monday through Friday between Point Reyes and Point San Pedro, which shall end no later than October 15. The minimum size limit shall be at least 26 inches total length.

The second component of the consultation standard is specified by a control rule that limits the maximum age-3 impact rate (allowable as a preseason forecast) for the area south of Point Arena, California (Appendix A, Figure A-3). The control rule specifies the maximum allowable age-3 impact rate on the basis of a forecast of the SRWC age-3 escapement in the absence of fisheries (83 FR 18233).

### *Predictor Description*

From 2018-2023 the forecast of the age-3 escapement absent fishing (abundance) was made using a stochastic SRWC life cycle model that is stratified by age, sex, and origin (hatchery and natural). Beginning in 2024, the forecast of SRWC age-3 escapement absent fishing was made using a Gaussian process model, which is a form of nonparametric regression. The model relates covariates directly to postseason estimates of the SRWC age-3 escapement absent fishing. This approach was reviewed at the 2023 Salmon Methodology Review and documentation of the approach can be found in the reports prepared for the Methodology Review, including: https://www.pcouncil.org/documents/2023/10/2023-salmon-methodology-review-material.pdf/ and https://www.pcouncil.org/documents/2023/10/d-3-supplemental-attachment-3-final-additional-material-requested-at-the-2023-salmon-methodology-review-meeting.pdf/. In November 2023, the Council adopted the Gaussian process model referred to as GP-1. The GP-1 model forecasts the age-3 escapement absent fishing using two predictors: the number of parental female spawners in the river (natural and hatchery origin) and a river temperature covariate (degree days above 12°C from May 15 - October 31 at Clear Creek Gage). Predictors were for the brood year (BY) three years prior to the return year to be forecasted.

### *Predictor Performance*

Forecasts of the SRWC age-3 escapement absent fishing, and postseason-estimated values, can be found in Table II-2.

### *Stock Forecast and Status*

The preliminary forecast of SRWC age-3 escapement absent fishing is 9,883. Application of the control rule results in a maximum age-3 impact rate of 20.0 percent for the area south of Point Arena in 2026 (Table II-2).

## 2.1.3 Klamath River Fall Chinook

### *Predictor Description*

For KRFC, linear regressions are used to relate September 1 ocean abundance estimates of age-3, age-4, and age-5 fish to that year's river run size estimates of age-2, age-3, and age-4 fish, respectively (Table II-3). Historical abundance estimates were derived from a cohort analysis of coded wire tag (CWT) information. The y-intercept of the regressions is constrained to zero, which gives the biologically reasonable expectation that a river run size of zero predicts an ocean abundance remainder of zero for the same cohort. The abundance of age-2 fish is not forecasted because no precursor to age-2 fish of that brood is available. Ocean fisheries harvest nominal numbers of age-2 KRFC.

The KRFC age-specific abundance forecasts have been made using all complete (or nearly complete) brood years since the 1979 brood. However, recent work suggests that using a more contemporary set of brood years to inform abundance forecasts resulted in better forecast performance. Limiting data to a moving window of the 10 most recent complete (or nearly complete) brood years resulted in the best performance among the alternatives considered. Since 2023, forecasts have been based on the 10 brood year moving window data range.

### *Predictor Performance*

The performance of past KRFC forecasts is displayed in Table II-4 and in Figure II-4. For 2025, the preseason forecast of the KRFC total adult abundance (82,672) was 50 percent of the postseason estimate (166,398).

Management of KRFC harvest since 1986 has attempted to achieve specific harvest rates on fully-vulnerable age-4 and age-5 fish in ocean and river fisheries (Table II-5). The Council has used a combination of quotas and time/area restrictions in ocean fisheries in an attempt to meet the harvest rate objective set each year. Since 1992, fisheries have been managed to achieve 50/50 allocation between tribal and non-tribal fisheries. Tribal and recreational river fisheries have been managed on the basis of adult Chinook quotas.

The FMP describes a control rule used annually to specify the maximum allowable exploitation rate on KRFC (Appendix A, Figure A-2). The allowable exploitation rate is determined by the predicted number of potential spawners, which is defined as the natural area adult escapement expected in the absence of fisheries. The FMP allows for any ocean and river harvest allocation that meets the exploitation rate constraints defined by the control rule.

The 2025 salmon fishery regulations were expected to result in 19,417 natural-area spawning adults and an age-4 ocean harvest rate of 1.6 percent. Postseason estimates of these quantities were 39,869 natural-area adult spawners and an age-4 ocean harvest rate of 2.2 percent (Table II-5 and Table II-6).

### *Stock Forecast and Status*

The 2026 forecast for the ocean abundance of KRFC as of September 1, 2025 (preseason) is 157,286 age-3 fish, 18,323 age-4 fish, and 624 age-5 fish.

Late-season commercial ocean fisheries in 2025 (September through October) were estimated to have harvested zero KRFC. Late-season recreational fisheries were estimated to have harvested zero KRFC. This fall harvest equates to a 0.0 percent age-4 ocean harvest rate, therefore, no harvest will be deducted from the ocean fishery's allocation when determining the 2026 allowable ocean harvest.

The forecast of potential spawner abundance is derived from the ocean abundance forecasts, ocean natural mortality rates, age-specific maturation rates, stray rates, and the proportion of escapement expected to spawn in natural areas. The 2026 KRFC potential spawner abundance forecast is 40,191 natural-area adults. This potential spawner abundance forecast applied to the KRFC control rule results in an allowable exploitation rate of 25 percent, which produces, in expectation, 30,143 natural-area adult spawners. Therefore, fisheries impacting KRFC must be crafted to achieve, in expectation, a minimum of 30,143 natural-area adult spawners in 2026.

### *OFL, ABC, and ACL*

The OFL, ABC, and ACL are defined in terms of spawner escapement ($S_{OFL}$, $S_{ABC}$, and $S_{ACL}$), and are calculated using potential spawner abundance forecasts and established exploitation rates. For KRFC, $F_{MSY}$ = 0.71, the value estimated from a stock-specific spawner-recruit analysis (STT 2005). The OFL for KRFC is = 40,191 × (1-0.71) = 11,655. Because KRFC is a Tier-1 stock, $F_{ABC} = F_{MSY} \times 0.95 = 0.68$, and $F_{ACL} = F_{ABC}$. The ABC for KRFC is $S_{ABC}$ = 40,191 × (1-0.68) = 12,861, with $S_{ACL} = S_{ABC}$. These preseason estimates will be recalculated with postseason abundance estimates (when available) to assess ACL and OFL compliance.

### 2.1.4 Other California Coastal Chinook Stocks

Other California coastal streams that support fall Chinook stocks which contribute to ocean fisheries off Oregon and California include the Smith, Mad, Eel, Mattole, and Russian Rivers, and Redwood Creek. Except for the Smith River, these populations are included in the California coastal Chinook ESU, which is listed as threatened under the ESA. Current information is insufficient to forecast the ocean abundance of these stocks; however, the NMFS ESA consultation standard restricts the KRFC age-4 ocean harvest rate to no more than 16.0 percent, as estimated postseason, to limit impacts on these stocks. In 2025, the age-4 ocean harvest rate was estimated to be 2.2 percent. The Klamath River spring, Smith River, Rogue River, Umpqua River, and other Oregon Chinook stocks south of the Elk River are components of the Southern Oregon/Northern California (SONC) Chinook complex, and as such, specification of ACLs is deferred to KRFC, the indicator stock for the SONC Chinook complex.

### 2.1.5 Oregon Coast Chinook Stocks

Oregon coast Chinook stocks are categorized into three major subgroups based on ocean migration patterns: the North Oregon Coast (NOC) Chinook aggregate, the Mid Oregon Coast (MOC) Chinook aggregate, and the South Oregon Coast (SOC) Chinook aggregate. Although their ocean harvest distributions overlap somewhat, they have been labeled as far-north, north, or south/local migrating, respectively.

#### *Far-North and North Migrating Chinook (NOC and MOC groups)*

Far-north and north migrating Chinook stocks include spring and fall stocks north of and including the Elk River, with the exception of Umpqua River spring Chinook. Based on CWT analysis, the populations from ten major NOC river systems from the Nehalem through the Siuslaw Rivers are harvested primarily in ocean fisheries off British Columbia and Southeast Alaska, and to a much lesser degree in Council area and terminal area (state waters) fisheries off Washington and Oregon. CWT analysis indicates populations from five major MOC systems, from the Coos through the Elk Rivers, are harvested primarily in ocean fisheries off British Columbia, Washington, Oregon, and in terminal area fisheries. Minor catches occur in California fisheries, and variable catches have been observed in southeast Alaska troll fisheries.

NOC and MOC Chinook stocks are components of the Far-North-Migrating Coastal (FNMC) Chinook complex, which is an exception to the ACL requirements of the MSA because they are managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for stocks in the FNMC complex.

#### *Predictor Description*

Quantitative abundance predictions are made for all three of the coastal Chinook groups (NOC, MOC, and SOC). Once available, forecast data for the NOC and MOC are incorporated into Chinook Fishery Regulation Assessment Model (FRAM) and used in the annual development of Council area fishery regulations. These forecasts are also used in the PSC management process and to inform terminal area management actions. Quantitative forecasts of abundance are based on sibling regression analyses from individual basin's escapement assessment data and scale sampling, which occur coastwide.

Natural spawner escapement is assessed yearly from the Nehalem through Sixes Rivers. Peak spawning counts of adults are obtained from standard index areas on these rivers and monitored to assess stock trends and reported in the annual *Review of Ocean Salmon Fisheries* (PFMC 2026, Chapter II, Table II-5, and Figure II-3). Natural fall Chinook stocks from both the NOC and MOC dominate production from this subgroup. Also present in lesser numbers are naturally-produced spring Chinook stocks from several rivers, and hatchery fall and/or spring Chinook released in the Trask, Nestucca, Salmon, and Elk rivers.

Basin-specific forecasts contribute an additive total to the overall aggregate forecasts and are derived in conjunction with annual PSC Chinook model input and calibration activities; however, they were not available at publication time.

### *Predictor Performance*

Predictors for NOC and MOC stocks are evaluated annually in the PSC's Chinook Technical Committee's Annual PSC Chinook Model Calibration Report.

### *Stock Forecast and Status*

#### 2.1.5.1.1 North Oregon Coast

Since 1977, the Salmon River Hatchery production has been tagged for use primarily as a PSC indicator stock for the NOC stock component. Because these fish are primarily harvested in fisheries north of the Council management area, the STT has not reviewed the procedure by which this indicator stock is used in estimating annual stock status. The 2025 NOC density from standard survey areas (Nehalem R. through the Siuslaw R.) was an increase from 2024 (PFMC 2026, Appendix B, Table B-11).

Based on the density index of total spawners, the generalized expectation for NOC stocks in 2026 is at or above the recent five years' average density of 113 spawners per mile. Specifically, the 2025 spawner density in standard survey areas for the NOC averaged 142 spawners per mile, the highest since 2015.

#### 2.1.5.1.2 Mid Oregon Coast

Since 1977, the Elk River Hatchery production has been tagged for potential use as a PSC indicator stock for the MOC stock aggregate. Beginning in 2019, Elk River Hatchery production was included as a PSC indicator stock. Age-specific ocean abundance forecasts for 2025 are not currently available but are being developed. The STT has not undertaken a review of the methods used by Oregon Department of Fish and Wildlife (ODFW) staff in developing these abundance forecasts; however, the PSC has, and those findings and recommendations are published in the PSC Technical Report No. 35.

The 2025 MOC density from standard survey areas in the Coos basin averaged 108 adult spawners per mile, an increase from 2024 (PFMC 2026, Appendix B, Table B-11). Standard survey areas also include the Coquille basin, however surveys have not been conducted since 2008.

### *South/Local Migrating Chinook (SOC group)*

South/local migrating Chinook stocks include Rogue River spring and fall Chinook, fall Chinook from smaller rivers south of the Elk River, and Umpqua River spring Chinook. These stocks are important contributors to ocean fisheries off Oregon and northern California. Umpqua River spring Chinook contribute to a lesser degree to fisheries off Washington, British Columbia, and southeast Alaska.

SOC stocks are components of the Southern Oregon/Northern California (SONC) Chinook complex, and as such, specification of ACLs is deferred to KRFC, the indicator stock for the SONC complex.

#### 2.1.5.1.3 Rogue River Fall Chinook

Rogue River fall Chinook contribute to ocean fisheries principally as age-3 through age-5 fish. Mature fish enter the river each year from mid-July through October, with the peak of the run occurring during August and September.

### *Predictor Description*

Carcass recoveries in Rogue River index surveys covering a large proportion of the total spawning area were available for 1977-2004. Using Klamath Ocean Harvest Model (KOHM) methodology, these carcass numbers, allocated into age-classes from scale data, were used to estimate the Rogue Ocean Population Index (ROPI) for age-3 to age-5 fish. A linear regression was developed using the escapement estimates (all ages) in year *t* based on seining at Huntley Park (1976-2004) to predict the ROPI in year *t*+1 (1977-2005).

Beginning in 2015, a revised predictor was used which relies on the Huntley Park escapement estimate and dispenses with the use of the carcass counts. Linear regressions are used to relate May 1 ocean abundance estimates of age-3, age-4, age-5, and age-6 Rogue fall Chinook to the previous year's river run size estimates of age-2, age-3, age-4, and age-5 fish, respectively. Historical May 1 ocean abundance estimates were derived from a cohort analysis of 1988-2006 brood years. May 1 (t) ocean abundances were converted to September 1 (t−1) forecasts by dividing the May (t) number by the assumed September 1 (t−1) through May 1 (t) survival rate of 0.5 age-3, 0.8 age-4, 0.8 age-5, and 0.8 age-6. River run size estimates are derived from a flow-based expansion of standardized seine catches of fall Chinook at Huntley Park (RM 8). The y-intercept of the regressions is constrained to zero.

The 2025 Huntley Park escapement estimate and the resulting 2026 ROPI forecast of 262,000 consists of age-3 (171,500), age-4 (66,200) and age-5-6 (24,300) fish.

### *Predictor Performance*

The ROPI is based on cohort reconstruction methods with index values predicted from regression equations. Because postseason estimates of the ROPI are not available, it is not possible to assess predictor performance.

### *Stock Forecast and Status*

The 2026 ROPI is the same as the most recent ten-year average (Table II-7).

### *Other SOC Stocks*

Umpqua and Rogue spring Chinook contribute to ocean fisheries primarily as age-3 fish. Mature Chinook enter the rivers primarily during April and May and generally prior to annual ocean fisheries.

Natural fall Chinook stocks from river systems south of the Elk River and spring Chinook stocks from the Rogue and Umpqua rivers dominate production from this subgroup. Substantial releases of hatchery spring Chinook occur in both the Rogue and Umpqua rivers, although also present in lesser numbers are hatchery fall Chinook, primarily from the Chetco River.

These stocks are minor contributors to general season mixed-stock ocean fisheries. Standard fall Chinook spawning index escapement data were available for the smaller SOC rivers (Winchuck, Chetco, and Pistol rivers). These had been used for assessment of the conservation objective for the SOC stocks prior to 2015. The preliminary 2025 average density from standard survey areas was 18 adult spawners per mile, a decrease from the 2024 average of 28 adult spawners per mile (PFMC 2026, Appendix B, Table B-8). Beginning in 2015, for the SOC Chinook stock complex, the conservation objective is assessed using the escapement estimate of naturally produced fall Chinook at Huntley Park on the Rogue River (PFMC 2026, Appendix B, Table B-10, Chapter II, Table II-5, and Figure II-3).

## 2.2 CHINOOK STOCKS NORTH OF CAPE FALCON

### 2.2.1 Columbia River Chinook

Columbia River fall Chinook stocks form the largest contributing stock group to Council Chinook fisheries north of Cape Falcon. Abundance of these stocks is a major factor in determining impacts of fisheries on weak natural stocks critical to Council area management, particularly the natural tule component of the ESA-listed LCR Chinook ESU. Abundance predictions are made for five major fall stock units characterized as being hatchery or natural production and originating above or below Bonneville Dam. The upriver brights (URB) and lower river wild (LRW) are primarily naturally-produced stocks, although the upriver brights do have a substantial hatchery component. The lower river hatchery (LRH) tule, Spring Creek Hatchery (SCH) tule, and Mid-Columbia Bright (MCB) are primarily hatchery-produced stocks. The MCB include the Lower River Bright (LRB) stock as a small naturally-produced component. LRB spawn in the mainstem Columbia River near Beacon Rock and are believed to have originated from MCB hatchery strays. The tule populations generally mature at an earlier age than the bright fall populations and do not migrate as far north. Minor fall populations include the Select Area Bright (SAB), a population originally from the Rogue River.

Upper Columbia River summer Chinook also contribute to Council area fisheries, although like URB and LRW, most ocean impacts occur in British Columbia (B.C.) and Southeast Alaska (SEAK) fisheries. Upper Columbia River summer Chinook has both natural and hatchery components and originate in areas upstream from Rock Island Dam.

URB and upper Columbia summer Chinook are exempt from the ACL requirements of the MSA because they are managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for these two stocks. ESA consultation standards serve the purpose of ACLs for ESA-listed stocks like LRW Chinook. Broodstock goals serve the purpose of ACLs for hatchery-origin stocks like LRH, SCH, and MCB.

#### *Predictor Description*

Preseason forecasts of Columbia River fall and summer Chinook stock abundance, used by the STT to assess the Council's adopted fishery regulations, are based on age-specific and stock-specific forecasts of annual ocean escapement (returns to the Columbia River). These forecasts are developed by WDFW and a subgroup of the *U.S. v Oregon* Technical Advisory Committee (TAC). Columbia River return forecast methodologies used for Council management are identical to those used for planning Columbia River fall season fisheries, although minor updates to Council estimates of inriver run size may occur prior to finalization of the inriver fishery plans, based on the results of planned ocean fisheries.

The 2026 return of summer and each fall Chinook stock group is forecasted using relationships between successive age groups within a cohort. The database for these relationships was constructed by combining age-specific estimates of escapement and in-river fishery catches for years since 1964 (except for MCB, which started in the 1980s). Fall Chinook stock identification in the Columbia River mixed-stock fisheries is determined by sampling catch and escapement for CWTs and visual stock identification (VSI). Age composition estimates are based on CWT data and scale reading of fishery and escapement samples, where available. These stock and age data for Columbia River fall Chinook are the basis for the return data presented in the *Review of 2025 Ocean Salmon Fisheries* (PFMC 2026, Appendix B, Tables B-15 through B-20). The 2025 returns for summer Chinook and the five fall Chinook stocks listed in this report may differ somewhat from those provided in the *Review of 2025 Ocean Salmon Fisheries*, since ocean escapement estimates may have been updated after that report was printed.

Summer and fall Chinook ocean escapement forecasts developed for the March Council meeting do not take into account variations in marine harvest. The STT combines the initial inriver run size (ocean escapement; Table II-8) with expected Council area fishery harvest levels and stock distribution patterns to produce adjusted ocean escapement forecasts based on the proposed ocean fishing regulations. These revised forecasts are available at the end of the Council preseason planning process in April and are used for preseason fishery modeling in the Columbia River.

### *Predictor Performance*

Performance of the preliminary inriver run size estimation methodology can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table II-8; Figure II-4). In 2025, the March preliminary preseason forecasts as a percentage of the postseason estimates were 108 percent for URB, 72 percent for LRW, 105 percent for LRH, 146 percent for SCH, 64 percent for MCB, and 87 percent for upper Columbia summer Chinook.

### *Stock Forecasts and Status*

URB fall Chinook: The 2026 preliminary forecast for ocean escapement of URB fall Chinook is 281,600 adults, about 97 percent of last year's return of 290,400 and about 100 percent of the recent 10-year average of 280,700. This forecasted ocean escapement should provide opportunity for both ocean and in-river fisheries while achieving the FMP $S_{MSY}$ conservation objective of 39,625 natural area spawners in the Hanford Reach, Yakima River, and areas above Priest Rapids Dam.

Snake River wild fall Chinook are a subcomponent of the URB fall Chinook stock unit. The 2026 preliminary forecast for ocean escapement of ESA-listed Snake River wild fall Chinook was not available at the time of publishing this report. The 2026 preliminary forecast for ocean escapement of Snake River hatchery fall Chinook was also not available at the time of publishing this report.

LRW fall Chinook: The preliminary forecast for 2026 ocean escapement of LRW fall Chinook is 15,800 adults, about 103 percent of the recent 10-year average return of 15,400. The forecast is about 80 percent of last year's actual return of 19,800. The spawning escapement goal of 5,700 in the North Fork Lewis River is expected to be achieved this year.

LRH fall Chinook: The 2026 preliminary forecast for ocean escapement of LRH fall Chinook is 118,600 adults, about 103 percent of last year's return of 115,400 and 148 percent of the recent 10-year average return of 80,300. Based on this abundance forecast, the total allowable LCR natural tule exploitation rate for 2026 fisheries is no greater than 41.0 percent under the abundance-based management matrix developed by the Tule Chinook Workgroup in 2011, recommended by the Council, and analyzed in NMFS' biological opinion concluding fisheries managed using the matrix are not likely to jeopardize the listed ESU (NMFS 2012). The matrix[2] is used is used to set the allowable exploitation rate for this stock (Appendix A, Table A-6).

SCH fall Chinook: The 2026 preliminary forecast for ocean escapement of SCH fall Chinook is 123,400 adults, about 98 percent of last year's return of 126,100 and 125 percent of the 10-year average of 98,600.

MCB fall Chinook: The 2026 preliminary forecast for ocean escapement of MCB fall Chinook is 111,500 adults, about 85 percent of last year's return of 130,900 and about 138 percent of the recent 10-year average of 80,800.

[2] The matrix developed by the Tule Chinook Workgroup was revised in 2024 to account for anticipated lower tule Chinook salmon abundance beginning in 2024 as a result of reductions in Mitchell Act production of tule Chinook salmon.

Summer Chinook: The 2026 preliminary forecast for ocean escapement of summer Chinook is 41,000 adults, about 94 percent of last year's return of 43,600 and about 71 percent of the recent 10-year average of 57,800. This ocean escapement forecast should provide some opportunity for both ocean and in-river fisheries while allowing for escapement exceeding the FMP $S_{MSY}$ conservation objective of 12,143 escapement above Rock Island Dam.

### 2.2.2 Washington Coast Chinook

Washington Coast Chinook consist of spring, summer, and fall stocks from Willapa Bay through the Hoko River. Based on limited CWT analysis, these populations are harvested primarily in ocean fisheries off British Columbia and Southeast Alaska, and to a lesser degree in Council-area fisheries off Washington and Oregon.

Washington Coast Chinook stocks are components of the FNMC Chinook complex, which is an exception to the ACL requirements of the MSA because it is managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for stocks in the FNMC complex.

#### *Predictor Description and Past Performance*

Council fisheries have negligible impacts on Washington Coast Chinook stocks and information to assess past performance is unavailable. However, abundance estimates are provided for Washington Coastal fall stocks in subsequent preseason fishery impact assessment reports prepared by the STT (e.g., Preseason Report III). Preseason adult forecasts for Washington Coast Chinook stocks and stock groups are listed in Table I-1.

#### *Stock Forecasts and Status*

The 2026 Willapa Bay natural fall Chinook terminal runsize forecast is 2,779, which is below the FMP $S_{MSY}$ conservation objective of 3,393. The hatchery fall Chinook terminal runsize forecast is 25,341.

The 2026 Grays Harbor spring Chinook forecast was not available at the time of this report. The Grays Harbor natural fall Chinook terminal runsize forecast is 13,001, which is below the FMP $S_{MSY}$ conservation objective of 13,326. The fall hatchery terminal runsize forecast is 2,570.

The 2026 Quinault River natural fall Chinook terminal runsize forecast is 4,358. The fall hatchery terminal runsize forecast is 5,398.

The 2026 Queets River spring Chinook terminal runsize forecast is 714. The FMP $S_{MSY}$ conservation objective is 700. The natural fall Chinook terminal runsize forecast is 4,254, which is greater than the FMP $S_{MSY}$ conservation objective of 2,500. The fall hatchery terminal runsize forecast is 541.

The 2026 Hoh River natural spring/summer Chinook terminal runsize forecast is 1,475, which is above the FMP $S_{MSY}$ conservation objective of 900. The natural fall Chinook terminal runsize forecast is 3,068, which is above the FMP $S_{MSY}$ conservation objective of 1,200.

The 2026 Quillayute River hatchery summer Chinook terminal runsize forecast is 3,471. The natural summer Chinook terminal runsize forecast is 2,548, which is above the FMP $S_{MSY}$ conservation objective of 1,200 summer Chinook. The fall Chinook terminal runsize forecast is 6,418, which is above the FMP $S_{MSY}$ conservation objective of 3,000 fall Chinook.

The 2026 Hoko River forecast is for an escapement without fishing of 1,245, which is above the FMP $S_{MSY}$ conservation objective of 850.

### 2.2.3 Puget Sound Chinook

Puget Sound Chinook stocks include all fall, summer, and spring stocks originating from U.S. tributaries in Puget Sound and the eastern Strait of Juan de Fuca (east of Salt Creek, inclusive). Puget Sound consists of numerous natural Chinook stocks of small to medium-sized populations and substantial hatchery production. The Puget Sound ESU was listed under the ESA as threatened in March 1999.

Council-area fishery impacts to Puget Sound Chinook stocks are generally very low, on the order of five percent or less. NMFS issued a biological opinion in 2004 concluding that Council-area fisheries were not likely to jeopardize listed Puget Sound Chinook and exempting these fisheries from the ESA section 9 take prohibition as long as they are consistent with the terms and conditions in the opinion's incidental take statement. This opinion does not cover the state-managed Puget Sound fisheries. In recent years, the comanagers have developed annual fishery management plans for Puget Sound and NMFS has issued one-year biological opinions for these plans exempting them from ESA section 9 take prohibitions. These opinions take into account the combined impacts of ocean and Puget Sound fisheries. Puget Sound stocks contribute to fisheries off B.C., are present to a lesser degree off SEAK, and are impacted to a minor degree by Council-area ocean fisheries. Because Council-area fishery impacts to Puget Sound Chinook stocks are minor, ocean regulations are not generally used to manage these stocks.

#### *Predictor Description*

Methodologies for estimates are described in the annual Puget Sound management reports (starting in 1993, reports are available by Puget Sound management unit, not by individual species). Forecasts for Puget Sound stocks generally assume production is dominated by age-4 adults. The STT has not undertaken a review of the methods employed by state and tribal staff in preparing these abundance forecasts. Run-size expectations for various Puget Sound stock management units are listed in Table I-1.

#### *Predictor Performance*

Performance of the preliminary in river run size estimation methodology can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates. Table II-9 compares preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook.

#### *Stock Forecasts and Status*

ACLs are undefined in the FMP for ESA-listed stocks like Puget Sound Chinook and are deferred to ESA consultation standards.

#### *Spring Chinook*

Puget Sound Spring Chinook abundances remain depressed.

#### *Summer/Fall Chinook*

The 2026 preliminary natural Chinook return forecast for Puget Sound is 36,500 (includes supplemental hatchery forecasts) and the preliminary hatchery Chinook return forecast for Puget Sound is 241,000. The 2025 preseason natural Chinook return forecast was 32,600 (includes supplemental hatchery forecasts) and the hatchery Chinook return forecast was 220,400 (Table I-1).

Since ESA listing, fishery management for Puget Sound Chinook has changed from an escapement goal basis to the use of stock-specific exploitation rates and "critical abundance thresholds." This comanagers develop fisheries annually using this approach consistent with the current Resource Management Plan (RMP).

## 2.3 STOCK STATUS DETERMINATION UPDATES

Klamath River fall Chinook were found to meet the criteria for being classified as overfished in the PFMC *Review of 2017 Ocean Salmon Fisheries*, released in February 2018. NMFS subsequently published an overfished designation in June 2018, and a rebuilding plan was developed and adopted by the Council in 2019. Queets River spring/summer Chinook were found to meet the criteria for being classified as overfished in the PFMC *Review of 2022 Ocean Salmon Fisheries*, released in February 2023, and a rebuilding plan was adopted by the Council in November 2024.

Based on the most recent three-year geometric mean escapements published in the PFMC *Review of 2025 Ocean Salmon Fisheries* (PFMC 2026), Klamath River fall Chinook (2023 – 2025) now meet the criteria for 'not overfished-rebuilding' status and Queets spring/summer Chinook (2022 – 2024) continue to meet the criteria for 'not overfished-rebuilding' status.

For Chinook stocks with available estimates of exploitation rates, none were subject to overfishing in the most recent year with estimates available.

## 2.4 SELECTIVE FISHERY CONSIDERATIONS FOR CHINOOK

As the North of Falcon region has moved forward with mass marking of hatchery Chinook salmon stocks, the first mark-selective fishery for Chinook salmon in Council waters was implemented in June 2010 in the recreational fishery north of Cape Falcon. In 2011 and 2012, the mark-selective fishery in June was 8 and 15 days, respectively. In 2013 and 2014, the North of Falcon mark-selective recreational fishery started in mid-May in Neah Bay and La Push subareas, then opened in all areas in late May or June. In 2015, the mark selective Chinook quota was 10,000 fish in the mid-May to mid-June fishery. Since 2015, no mark-selective fisheries for Chinook in Council waters have occurred. For 2026 preseason planning, selective fishing options for non-Indian fisheries may be under consideration in the ocean area from Cape Falcon, Oregon to the U.S./Canada border. Observed mark rates in previous mark-selective fisheries north of Cape Falcon ranged from 53 to 71 percent. Similar mark rates are expected in this area for 2026.

TABLE II-1. Harvest and abundance indices for adult Sacramento River fall Chinook (SRFC) in thousands of fish. (Page 1 of 2)

| | SRFC Ocean Harvest South of Cape Falcon[a/] | | | | SRFC Ocean Harvest North of Cape Falcon[f/] | River | Spawning Escapement | | | Sacramento | Exploitation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Troll | Sport | Non-Ret[b/] | Total | Total | Harvest | Natural | Hatchery | Total | Index (SI)[c/] | Rate (%)[d/] |
| 1983 | 246.6 | 86.3 | 0.0 | 332.9 | - | 18.0 | 91.7 | 18.6 | 110.2 | 461.1 | 76 |
| 1984 | 266.2 | 87.0 | 0.0 | 353.1 | - | 25.9 | 120.2 | 38.7 | 159.0 | 538.1 | 70 |
| 1985 | 355.5 | 158.9 | 0.0 | 514.4 | - | 39.1 | 210.1 | 29.3 | 239.3 | 792.8 | 70 |
| 1986 | 619.0 | 137.5 | 0.0 | 756.4 | - | 39.2 | 218.3 | 21.8 | 240.1 | 1,035.7 | 77 |
| 1987 | 686.1 | 173.1 | 0.0 | 859.2 | - | 31.8 | 175.2 | 19.8 | 195.1 | 1,086.1 | 82 |
| 1988 | 1,163.2 | 188.3 | 0.0 | 1,351.5 | - | 37.1 | 200.7 | 26.8 | 227.5 | 1,616.1 | 86 |
| 1989 | 602.8 | 157.1 | 0.0 | 759.9 | - | 24.9 | 127.6 | 24.9 | 152.6 | 937.3 | 84 |
| 1990 | 507.3 | 150.4 | 0.0 | 657.8 | - | 17.2 | 83.3 | 21.7 | 105.1 | 780.0 | 87 |
| 1991 | 300.1 | 89.6 | 0.0 | 389.7 | - | 26.0 [e/] | 92.8 | 26.0 | 118.9 | 534.6 | 78 |
| 1992 | 233.3 | 69.4 | 0.0 | 302.8 | - | 13.3 [e/] | 59.9 | 21.7 | 81.5 | 397.6 | 79 |
| 1993 | 342.8 | 115.3 | 0.0 | 458.1 | - | 27.7 [e/] | 112.8 | 24.6 | 137.4 | 623.2 | 78 |
| 1994 | 303.5 | 168.8 | 0.0 | 472.3 | - | 28.9 [e/] | 135.0 | 30.6 | 165.6 | 666.7 | 75 |
| 1995 | 730.7 | 390.4 | 0.0 | 1,121.0 | - | 48.2 | 253.8 | 41.5 | 295.3 | 1,464.6 | 80 |
| 1996 | 426.8 | 157.0 | 0.0 | 583.8 | - | 49.2 | 269.1 | 32.5 | 301.6 | 934.7 | 68 |
| 1997 | 579.7 | 210.3 | 0.0 | 790.0 | - | 56.3 | 281.6 | 63.3 | 344.8 | 1,191.1 | 71 |
| 1998 | 292.3 | 114.0 | 0.0 | 406.3 | - | 69.8 [e/] | 176.0 | 69.9 | 245.9 | 722.1 | 66 |
| 1999 | 289.1 | 76.2 | 0.0 | 365.3 | - | 68.9 [e/] | 357.6 | 42.2 | 399.8 | 834.0 | 52 |
| 2000 | 421.8 | 152.8 | 0.0 | 574.6 | - | 59.5 [e/] | 370.0 | 47.6 | 417.5 | 1,051.6 | 60 |
| 2001 | 284.4 | 93.4 | 0.0 | 377.9 | - | 97.4 | 539.4 | 57.4 | 596.8 | 1,072.0 | 44 |
| 2002 | 447.7 | 184.0 | 0.0 | 631.7 | - | 89.2 [e/] | 684.2 | 85.6 | 769.9 | 1,490.8 | 48 |
| 2003 | 501.6 | 106.4 | 0.0 | 608.0 | - | 85.4 | 414.6 | 108.4 | 523.0 | 1,216.3 | 57 |
| 2004 | 621.8 | 212.6 | 0.0 | 834.5 | - | 46.8 | 206.2 | 80.7 | 286.9 | 1,168.2 | 75 |
| 2005 | 367.9 | 127.0 | 0.0 | 494.9 | - | 64.6 | 214.9 | 181.1 | 396.0 | 955.5 | 59 |
| 2006 | 149.9 | 107.7 | 0.0 | 257.7 | - | 44.9 | 196.5 | 78.5 | 275.0 | 577.6 | 52 |
| 2007 | 119.9 | 32.0 | 0.0 | 152.0 | - | 14.3 [e/] | 70.1 | 21.3 | 91.4 | 257.7 | 65 |
| 2008 | 3.2 | 0.9 | 0.0 | 4.1 | - | 0.1 [e/] | 47.3 | 18.0 | 65.4 | 69.6 | 6 |
| 2009 | 0.0 | 0.2 | 0.1 | 0.3 | - | 0.0 [e/] | 24.9 | 15.9 | 40.9 | 41.1 | 1 |
| 2010 | 11.2 | 11.4 | 0.3 | 22.8 | - | 2.7 [e/] | 91.1 | 33.2 | 124.3 | 149.8 | 17 |

TABLE II-1. Harvest and abundance indices for adult Sacramento River fall Chinook (SRFC) in thousands of fish. (Page 2 of 2)

| | SRFC Ocean Harvest South of Cape Falcon[a/] | | | | SRFC Ocean Harvest North of Cape Falcon[f/] | River | Spawning Escapement | | | Sacramento | Exploitation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Troll | Sport | Non-Ret[b/] | Total | Total | Harvest | Natural | Hatchery | Total | Index (SI)[c/] | Rate (%)[d/] |
| 2011 | 46.7 | 22.8 | 0.0 | 69.5 | - | 18.2 [e/] | 77.9 | 41.5 | 119.3 | 207.0 | 42 |
| 2012 | 183.1 | 93.4 | 0.3 | 276.7 | - | 65.8 [e/] | 166.2 | 119.2 | 285.4 | 627.9 | 55 |
| 2013 | 290.7 | 114.3 | 0.0 | 404.9 | - | 57.5 [e/] | 305.6 | 101.2 | 406.8 | 869.3 | 53 |
| 2014 | 240.6 | 62.4 | 0.0 | 303.0 | - | 35.7 [e/] | 168.7 | 43.8 | 212.5 | 551.2 | 61 |
| 2015 | 100.1 | 24.5 | 0.0 | 124.6 | - | 16.9 [e/] | 74.5 | 39.0 | 113.5 | 254.9 | 55 |
| 2016 | 62.9 | 28.9 | 0.0 | 91.8 | - | 23.9 [e/] | 56.3 | 33.4 | 89.7 | 205.3 | 56 |
| 2017 | 38.7 | 31.9 | 0.0 | 70.7 | - | 22.1 [e/] | 17.9 | 26.5 | 44.3 | 137.1 | 68 |
| 2018 | 53.7 | 45.0 | 0.0 | 98.6 | - | 16.3 [e/] | 71.7 | 33.8 | 105.5 | 220.4 | 52 |
| 2019 | 248.6 | 74.4 | 0.0 | 323.0 | - | 20.3 [e/] | 121.6 | 42.1 | 163.8 | 507.1 | 68 |
| 2020 | 154.8 | 44.6 | 0.0 | 199.5 | - | 14.9 [e/] | 100.2 | 37.9 | 138.1 | 352.5 | 61 |
| 2021 | 165.7 | 41.7 | 0.0 | 207.4 | - | 10.8 [e/] | 72.8 | 32.8 | 105.6 | 323.8 | 67 |
| 2022 | 135.9 | 50.2 | 0.0 | 186.0 | - | 4.9 [e/] | 32.7 | 29.2 | 61.9 | 252.8 | 76 |
| 2023 | 3.8 | 1.8 | 0.0 | 5.6 | - | 0.0 [e/] | 105.8 | 27.9 | 133.7 | 139.2 | 4 |
| 2024 | 4.9 | 0.5 | 0.0 | 5.4 | - | 0.0 [e/] | 74.3 | 25.8 | 100.2 | 105.6 | 5 |
| 2025[g/] | 2.3 | 6.1 | 0.0 | 8.4 | 2.9 | 3.3 [e/] | 130.4 | 34.3 | 164.8 | 176.4 | 7 |

a/ Ocean harvest for the period September 1 (t-1) through August 31 (t).

b/ Mortalities estimated from non-retention ocean fisheries (e.g., coho-only fisheries, non-retention GSI sampling). In 2008, there were 37 estimated mortalities as a result of non-retention fisheries that have been rounded to 0 in this table.

c/ The SI is the sum of (1) SRFC ocean fishery harvest south of Cape Falcon between September 1 and August 31, (2) SRFC impacts from non-retention ocean fisheries when they occur, (3) the recreational harvest of SRFC in the Sacramento River Basin, and (4) the SRFC spawner escapement.

d/ Total ocean harvest, non-retention ocean fishery mortalities, and river harvest of SRFC as a percentage of the SI.

e/ Estimates derived from CDFW Sacramento River Basin angler survey. Estimates not marked with a footnote are inferred from escapement data and the mean river harvest rate estimate.

f/ Following the 2024 methodology review, the Council directed inclusion of SRFC harvest from North of Cape Falcon (NOF) fisheries as soon as reasonably possible. Harvest of SRFC from NOF fisheries is reported here, but work is ongoing to fully incorporate NOF harvest into SRFC assessment.

g/ Preliminary.

TABLE II-2. Sacramento River winter Chinook abundance forecasts, allowable age-3 impact rates, and management performance.

| | | | | Age-3 impact rate south of Point Arena, CA | | |
|---|---|---|---|---|---|---|
| Year[a/] | 3-Year Geo. Mean[b/] | Abundance Forecast [c/] | Postseason Abundance[d/] | Maximum Allowable (%)[e/] | Preseason Forecast (%) | Postseason Estimate (%) |
| 2000 | | - | | - | - | 21.4 |
| 2001 | | - | 8,508 | - | - | 23.3 |
| 2002 | | - | 9,092 | - | - | 21.8 |
| 2003 | | - | 5,976 | - | - | 10.3 |
| 2004 | | - | 18,090 | - | - | 24.8 |
| 2005 | | - | 18,907 | - | - | 17.2 |
| 2006 | | - | 2,619 | - | - | 15.1 |
| 2007 | | - | 2,954 | - | - | 17.8 |
| 2008 | | - | 4,152 | - | - | 0.0 |
| 2009 | | - | 1,439 | - | - | 0.0 |
| 2010 | | - | 696 | - | - | e/ |
| 2011 | | - | 3,263 | - | - | 28.3 |
| 2012 | 1,797 | - | 5,960 | 13.7 | 13.7 | 12.6 |
| 2013 | 1,521 | - | 3,067 | 12.9 | 12.9 | 18.8 |
| 2014 | 2,380 | - | 3,718 | 15.4 | 15.4 | 15.8 |
| 2015 | 3,659 | - | 867 | 19.0 | 17.5 | e/ |
| 2016 | 3,981 | - | 508 | 19.9 | 12.8 | 10.7 |
| 2017 | 2,521 | - | 2,117 | 15.8 | 12.2 | 17.6 |
| 2018 | | 1,594 | 8,139 | 14.4 | 8.5 | 13.9 |
| 2019 | | 1,924 | 6,935 | 15.7 | 14.8 | 10.0 |
| 2020 | | 3,077 | 10,854 | 20.0 | 16.2 | 12.6 |
| 2021 | | 9,063 | 6,346 | 20.0 | 14.7 | 18.8 |
| 2022 | | 5,971 | 3,071 | 20.0 | 15.2 | 26.2[g/] |
| 2023 | | 4,540 | f/ | 20.0 | 0.0 | NA[h/] |
| 2024 | | 1,013 | f/ | 12.1 | -- | -- |
| 2025 | | 4,507 | f/ | 20.0 | 1.6 | NA |
| 2026[i/] | | 9,883 | f/ | 20.0 | NA | NA |

a/ Year indicates the management year in which age-3 SRWC are exposed to ocean fisheries.

b/ Allowable impact rates from 2012-2017 were determined by an abundance-based control rule, where abundance was defined as the most recent three-year geometric mean of escapement.

c/ Since 2018, the abundance forecast has been defined as the predicted age-3 escapement in the absence of fisheries. Forecasts were made using a life cycle model through 2023. Beginning in 2024, forecasts were made using a Gaussian Process model.

d/ Postseason estimates of the age-3 escapement in the absence of fisheries.

e/ Beginning in 2018, allowable impact rates were determined by a new control rule utilizing forecasts of the age-3 escapement in the absence of fisheries.

f/ Insufficient data for postseason estimate.

g/ Preliminary. Incomplete cohort data (age-4 escapement unavailable).

h/ Not estimated. Incomplete cohort data (age-3 and age-4 escapement unavailable).

i/ Preliminary.

TABLE II-3. Klamath River fall Chinook ocean abundance (thousands), harvest rate, and river run size estimates (thousands) by age. (Page 1 of 2).

| | Ocean Abundance Sept. 1 (t-1) | | | Annual Ocean Harvest Rate Sept. 1 (t-1) - Aug. 31 (t) | | Klamath Basin River Run (t) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year (t) | Age-3 | Age-4 | Total | Age-3 | Age-4 | Age-2 | Age-3 | Age-4 | Age-5 | Total Adults |
| 1981 | 493.2 | 57.0 | 550.2 | 0.21 | 0.53 | 28.2 | 64.1 | 14.4 | 1.8 | 80.3 |
| 1982 | 561.1 | 133.4 | 694.5 | 0.30 | 0.52 | 39.4 | 30.1 | 33.9 | 2.6 | 66.6 |
| 1983 | 313.3 | 114.2 | 427.5 | 0.19 | 0.60 | 3.8 | 35.9 | 20.7 | 0.9 | 57.5 |
| 1984 | 157.3 | 82.8 | 240.1 | 0.08 | 0.38 | 8.3 | 21.7 | 24.4 | 1.1 | 47.2 |
| 1985 | 374.8 | 56.9 | 431.7 | 0.11 | 0.24 | 69.4 | 32.9 | 25.7 | 5.8 | 64.4 |
| 1986 | 1,304.4 | 140.8 | 1,445.2 | 0.18 | 0.46 | 44.6 | 162.9 | 29.8 | 2.3 | 195.0 |
| 1987 | 781.1 | 341.9 | 1,123.0 | 0.16 | 0.43 | 19.1 | 89.7 | 112.6 | 6.8 | 209.1 |
| 1988 | 756.3 | 234.8 | 991.0 | 0.20 | 0.39 | 24.1 | 101.2 | 86.5 | 3.9 | 191.6 |
| 1989 | 369.8 | 177.2 | 547.1 | 0.15 | 0.36 | 9.1 | 50.4 | 69.6 | 4.3 | 124.3 |
| 1990 | 176.1 | 104.0 | 280.1 | 0.30 | 0.55 | 4.4 | 11.6 | 22.9 | 1.3 | 35.9 |
| 1991 | 69.4 | 37.2 | 106.6 | 0.03 | 0.18 | 1.8 | 10.0 | 21.6 | 1.1 | 32.7 |
| 1992 | 39.5 | 28.2 | 67.7 | 0.02 | 0.07 | 13.7 | 6.9 | 18.8 | 1.0 | 26.7 |
| 1993 | 168.5 | 15.0 | 183.5 | 0.05 | 0.16 | 7.6 | 48.3 | 8.2 | 0.7 | 57.2 |
| 1994 | 119.9 | 41.7 | 161.7 | 0.03 | 0.09 | 14.4 | 37.0 | 26.0 | 1.0 | 64.0 |
| 1995 | 787.3 | 28.7 | 816.0 | 0.04 | 0.14 | 22.8 | 201.9 | 18.3 | 2.6 | 222.8 |
| 1996 | 192.3 | 226.3 | 418.6 | 0.05 | 0.16 | 9.5 | 38.8 | 136.7 | 0.3 | 175.8 |
| 1997 | 140.2 | 62.8 | 203.0 | 0.01 | 0.06 | 8.0 | 35.0 | 44.2 | 4.6 | 83.7 |
| 1998 | 154.8 | 44.7 | 199.5 | 0.00 | 0.09 | 4.6 | 59.2 | 29.7 | 1.7 | 90.6 |
| 1999 | 129.1 | 30.5 | 159.5 | 0.02 | 0.09 | 19.2 | 29.2 | 20.5 | 1.3 | 51.0 |
| 2000 | 617.1 | 44.2 | 661.3 | 0.06 | 0.10 | 10.2 | 187.1 | 30.5 | 0.5 | 218.1 |
| 2001 | 356.1 | 133.8 | 489.9 | 0.03 | 0.09 | 11.3 | 99.1 | 88.2 | 0.1 | 187.3 |
| 2002 | 513.6 | 98.9 | 612.5 | 0.02 | 0.15 | 9.2 | 94.6 | 62.5 | 3.7 | 160.8 |
| 2003 | 401.1 | 192.2 | 593.3 | 0.08 | 0.21 | 3.8 | 94.3 | 96.8 | 0.9 | 191.9 |
| 2004 | 159.4 | 105.2 | 264.7 | 0.12 | 0.35 | 9.6 | 33.1 | 40.5 | 5.3 | 78.9 |
| 2005 | 190.0 | 38.1 | 228.1 | 0.02 | 0.20 | 2.3 | 43.8 | 17.5 | 3.9 | 65.2 |
| 2006 | 90.7 | 63.4 | 154.1 | 0.01 | 0.10 | 26.9 | 18.5 | 41.6 | 1.3 | 61.4 |
| 2007 | 376.9 | 33.7 | 410.6 | 0.06 | 0.21 | 1.7 | 113.7 | 16.8 | 1.6 | 132.1 |
| 2008 | 68.0 | 81.4 | 149.4 | 0.00 | 0.10 | 25.2 | 18.6 | 50.2 | 1.7 | 70.6 |
| 2009 | 240.8 | 21.1 | 261.9 | 0.00 | 0.00 | 11.9 | 78.6 | 16.4 | 5.6 | 100.6 |
| 2010 | 192.8 | 62.1 | 254.8 | 0.01 | 0.04 | 16.6 | 46.1 | 44.3 | 0.4 | 90.9 |

TABLE II-3. Klamath River fall Chinook ocean abundance (thousands), harvest rate, and river run size estimates (thousands) by age. (Page 2 of 2).

| | Ocean Abundance Sept. 1 (t-1) | | | Annual Ocean Harvest Rate Sept. 1 (t-1) - Aug. 31 (t) | | Klamath Basin River Run (t) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year (t) | Age-3 | Age-4 | Total | Age-3 | Age-4 | Age-2 | Age-3 | Age-4 | Age-5 | Total Adults |
| 2011 | 240.2 | 64.6 | 304.8 | 0.03 | 0.08 | 84.9 | 59.0 | 41.0 | 2.0 | 102.0 |
| 2012 | 799.4 | 74.3 | 873.7 | 0.03 | 0.08 | 21.4 | 243.9 | 49.3 | 2.1 | 295.3 |
| 2013 | 438.4 | 194.4 | 632.9 | 0.04 | 0.20 | 14.4 | 55.2 | 108.8 | 1.1 | 165.0 |
| 2014 | 216.5 | 180.7 | 397.2 | 0.03 | 0.17 | 22.3 | 57.8 | 98.7 | 3.9 | 160.4 |
| 2015 | 110.5 | 61.0 | 171.5 | 0.02 | 0.22 | 6.1 | 36.7 | 34.0 | 7.1 | 77.8 |
| 2016 | 32.7 | 24.8 | 57.4 | 0.01 | 0.09 | 2.8 | 8.6 | 15.5 | 0.5 | 24.6 |
| 2017 | 63.2 | 9.8 | 73.1 | 0.02 | 0.04 | 20.3 | 24.4 | 7.3 | 1.6 | 33.2 |
| 2018 | 193.7 | 10.5 | 204.2 | 0.06 | 0.24 | 10.9 | 85.5 | 5.6 | 0.0 | 91.1 |
| 2019 | 81.8 | 15.7 | 97.5 | 0.04 | 0.36 | 10.0 | 30.2 | 6.8 | 0.1 | 37.1 |
| 2020 | 129.1 | 14.2 | 143.3 | 0.01 | 0.23 | 9.1 | 37.8 | 7.6 | 0.0 | 45.4 |
| 2021 | 142.8 | 35.7 | 178.6 | 0.05 | 0.28 | 10.4 | 36.3 | 17.7 | 0.2 | 54.2 |
| 2022 | 126.9 | 38.3 | 165.2 | 0.07 | 0.39 | 7.5 | 32.1 | 14.3 | 0.2 | 46.6 |
| 2023 | 94.0 | 33.1 | 127.1 | 0.00 | 0.00 | 11.7 | 39.4 | 25.4 | 0.9 | 65.7 |
| 2024 | 75.9[a/] | 15.3 | 91.1 | 0.00[a/] | 0.02 | 7.1 | 24.7 | 11.1 | 0.7 | 36.6 |
| 2025 | 146.3[b/] | 19.6[a/] | 165.9 | ----[c/] | 0.02[a/] | 18.6 | 37.5 | 13.6 | 0.4 | 51.4 |

a/ Preliminary: incomplete cohort data (age-5 unavailable).

b/ Preliminary: incomplete cohort data (age-4 and age-5 unavailable).

c/ Not estimated: incomplete cohort data (age-4 and age-5 unavailable).

TABLE II-4. Comparisons of preseason forecast and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 1 of 4)

| Year (t) | Preseason Forecast[a/] Sept. 1 (t-1) | Postseason Estimate Sept. 1 (t-1) | Pre/Postseason |
|---|---|---|---|
| | | **Age-3** | |
| 1985 | 113,000 | 374,822 | 0.30 |
| 1986 | 426,000[b/] | 1,304,409 | 0.33 |
| 1987 | 511,800 | 781,122 | 0.66 |
| 1988 | 370,800 | 756,261 | 0.49 |
| 1989 | 450,600 | 369,828 | 1.22 |
| 1990 | 479,000 | 176,122 | 2.72 |
| 1991 | 176,200 | 69,424 | 2.54 |
| 1992 | 50,000 | 39,502 | 1.27 |
| 1993 | 294,400 | 168,473 | 1.75 |
| 1994 | 138,000 | 119,915 | 1.15 |
| 1995 | 269,000 | 787,309 | 0.34 |
| 1996 | 479,800 | 192,272 | 2.50 |
| 1997 | 224,600 | 140,153 | 1.60 |
| 1998 | 176,000 | 154,799 | 1.14 |
| 1999 | 84,800 | 129,066 | 0.66 |
| 2000 | 349,600 | 617,097 | 0.57 |
| 2001 | 187,200 | 356,128 | 0.53 |
| 2002 | 209,000 | 513,604 | 0.41 |
| 2003 | 171,300 | 401,112 | 0.43 |
| 2004 | 72,100 | 159,446 | 0.45 |
| 2005 | 185,700 | 189,977 | 0.98 |
| 2006 | 44,100 | 90,666 | 0.49 |
| 2007 | 515,400 | 376,940 | 1.37 |
| 2008 | 31,600 | 68,015 | 0.46 |
| 2009 | 474,900 | 240,787 | 1.97 |
| 2010 | 223,400 | 192,750 | 1.16 |
| 2011 | 304,600 | 240,222 | 1.27 |
| 2012 | 1,567,600 | 799,446 | 1.96 |
| 2013 | 390,700 | 438,443 | 0.89 |
| 2014 | 219,800 | 216,493 | 1.02 |
| 2015 | 342,200 | 110,506 | 3.10 |
| 2016 | 93,400 | 32,670 | 2.86 |
| 2017 | 42,000 | 63,235 | 0.66 |
| 2018 | 330,000 | 193,685 | 1.70 |
| 2019 | 167,500 | 81,818 | 2.05 |
| 2020 | 149,600 | 129,077 | 1.16 |
| 2021 | 135,600 | 142,822 | 0.95 |
| 2022 | 155,000 | 126,917 | 1.22 |
| 2023 | 75,300 | 94,023 | 0.80 |
| 2024[c/] | 138,700 | 75,871 | 1.83 |
| 2025[c/] | 67,100 | 146,300 | 0.46 |
| 2026 | 157,300 | -- | -- |

TABLE II-4. Comparisons of preseason forecasts and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 2 of 4)

| Year (t) | Preseason Forecast[a/] Sept. 1 (t-1) | Postseason Estimate Sept. 1 (t-1) | Pre/Postseason |
|---|---|---|---|
| | | **Age-4** | |
| 1985 | 56,900 | 56,908 | 1.00 |
| 1986 | 66,300 | 140,823 | 0.47 |
| 1987 | 206,100 | 341,875 | 0.60 |
| 1988 | 186,400 | 234,751 | 0.79 |
| 1989 | 215,500 | 177,245 | 1.22 |
| 1990 | 50,100 | 103,951 | 0.48 |
| 1991 | 44,600 | 37,171 | 1.20 |
| 1992 | 44,800 | 28,169 | 1.59 |
| 1993 | 39,100 | 15,037 | 2.60 |
| 1994 | 86,100 | 41,736 | 2.06 |
| 1995 | 47,000 | 28,726 | 1.64 |
| 1996 | 268,500 | 226,282 | 1.19 |
| 1997 | 53,900 | 62,820 | 0.86 |
| 1998 | 46,000 | 44,733 | 1.03 |
| 1999 | 78,800 | 30,456 | 2.59 |
| 2000 | 38,900 | 44,176 | 0.88 |
| 2001 | 247,000 | 133,801 | 1.85 |
| 2002 | 143,800 | 98,927 | 1.45 |
| 2003 | 132,400 | 192,180 | 0.69 |
| 2004 | 134,500 | 105,246 | 1.28 |
| 2005 | 48,900 | 38,079 | 1.28 |
| 2006 | 63,700 | 63,384 | 1.00 |
| 2007 | 26,100 | 33,650 | 0.78 |
| 2008 | 157,200 | 81,411 | 1.93 |
| 2009 | 25,200 | 21,131 | 1.19 |
| 2010 | 106,300 | 62,089 | 1.71 |
| 2011 | 61,600 | 64,570 | 0.95 |
| 2012 | 79,600 | 74,300 | 1.07 |
| 2013 | 331,200 | 194,407 | 1.70 |
| 2014 | 67,400 | 180,669 | 0.37 |
| 2015 | 71,100 | 60,979 | 1.17 |
| 2016 | 45,100 | 24,777 | 1.82 |
| 2017 | 10,600 | 9,821 | 1.08 |
| 2018 | 28,400 | 10,531 | 2.70 |
| 2019 | 106,100 | 15,660 | 6.78 |
| 2020 | 36,200 | 14,237 | 2.54 |
| 2021 | 45,100 | 35,729 | 1.26 |
| 2022 | 43,200 | 38,314 | 1.13 |
| 2023 | 27,200 | 33,104 | 0.82 |
| 2024 | 39,500 | 15,271 | 2.59 |
| 2025[c/] | 14,300 | 19,608 | 0.73 |
| 2026 | 18,300 | -- | -- |

TABLE II-4. Comparisons of preseason forecasts and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 3 of 4)

| Year (t) | Preseason Forecast[a/] Sept. 1 (t-1) | Postseason Estimate Sept. 1 (t-1) | Pre/Postseason |
|---|---|---|---|
| | | **Age-5** | |
| 1985 | NA | 11,113 | NA |
| 1986 | NA | 6,376 | NA |
| 1987 | 5,300 | 19,414 | 0.27 |
| 1988 | 13,300 | 14,632 | 0.91 |
| 1989 | 10,100 | 9,612 | 1.05 |
| 1990 | 7,600 | 7,767 | 0.98 |
| 1991 | 1,500 | 2,774 | 0.54 |
| 1992 | 1,300 | 1,444 | 0.90 |
| 1993 | 1,100 | 1,759 | 0.63 |
| 1994 | 500 | 1,468 | 0.34 |
| 1995 | 2,000 | 3,805 | 0.53 |
| 1996 | 1,100 | 788 | 1.40 |
| 1997 | 7,900 | 9,004 | 0.88 |
| 1998 | 3,300 | 2,382 | 1.39 |
| 1999 | 2,000 | 2,106 | 0.95 |
| 2000 | 1,400 | 1,051 | 1.33 |
| 2001 | 1,300 | 258 | 5.04 |
| 2002 | 9,700 | 6,933 | 1.40 |
| 2003 | 6,500 | 1,915 | 3.39 |
| 2004 | 9,700 | 17,184 | 0.56 |
| 2005 | 5,200 | 6,859 | 0.76 |
| 2006 | 2,200 | 5,236 | 0.42 |
| 2007 | 4,700 | 2,911 | 1.61 |
| 2008 | 1,900 | 2,900 | 0.66 |
| 2009 | 5,600 | 7,059 | 0.79 |
| 2010 | 1,800 | 517 | 3.48 |
| 2011 | 5,000 | 2,753 | 1.82 |
| 2012 | 4,600 | 5,110 | 0.90 |
| 2013 | 5,700 | 3,945 | 1.44 |
| 2014 | 12,100 | 7,625 | 1.59 |
| 2015 | 10,400 | 13,283 | 0.78 |
| 2016 | 3,700 | 1,142 | 3.24 |
| 2017 | 1,700 | 2,024 | 0.84 |
| 2018 | 800 | 50 | 16.00 |
| 2019 | 600 | 220 | 2.73 |
| 2020 | 700 | 24 | 29.17 |
| 2021 | 800 | 401 | 2.00 |
| 2022 | 1,900 | 545 | 3.49 |
| 2023 | 1,300 | 1,107 | 1.17 |
| 2024 | 2,400 | 1,030 | 2.33 |
| 2025 | 1,300 | 490 | 2.65 |
| 2026 | 600 | -- | -- |

TABLE II-4. Comparisons of preseason forecasts and postseason estimates for ocean abundance of adult Klamath River fall Chinook. (Page 4 of 4)

| Year (t) | Preseason Forecast[a/] Sept. 1 (t-1) | Postseason Estimate Sept. 1 (t-1) | Pre/Postseason |
|---|---|---|---|
| | | **Total Adults** | |
| 1985 | 169,900[d/] | 442,843 | 0.38 |
| 1986 | 492,300[d/] | 1,451,608 | 0.34 |
| 1987 | 723,200 | 1,142,411 | 0.63 |
| 1988 | 570,500 | 1,005,644 | 0.57 |
| 1989 | 676,200 | 556,685 | 1.21 |
| 1990 | 536,700 | 287,840 | 1.86 |
| 1991 | 222,300 | 109,369 | 2.03 |
| 1992 | 96,100 | 69,115 | 1.39 |
| 1993 | 334,600 | 185,269 | 1.81 |
| 1994 | 224,600 | 163,119 | 1.38 |
| 1995 | 318,000 | 819,840 | 0.39 |
| 1996 | 749,400 | 419,342 | 1.79 |
| 1997 | 286,400 | 211,977 | 1.35 |
| 1998 | 225,300 | 201,914 | 1.12 |
| 1999 | 165,600 | 161,628 | 1.02 |
| 2000 | 389,900 | 662,324 | 0.59 |
| 2001 | 435,500 | 490,187 | 0.89 |
| 2002 | 362,500 | 619,464 | 0.59 |
| 2003 | 310,200 | 595,207 | 0.52 |
| 2004 | 216,300 | 281,876 | 0.77 |
| 2005 | 239,800 | 234,915 | 1.02 |
| 2006 | 110,000 | 159,286 | 0.69 |
| 2007 | 546,200 | 413,501 | 1.32 |
| 2008 | 190,700 | 152,326 | 1.25 |
| 2009 | 505,700 | 268,977 | 1.88 |
| 2010 | 331,500 | 255,356 | 1.30 |
| 2011 | 371,100 | 307,545 | 1.21 |
| 2012 | 1,651,800 | 878,856 | 1.88 |
| 2013 | 727,700 | 636,795 | 1.14 |
| 2014 | 299,300 | 404,787 | 0.74 |
| 2015 | 423,800 | 184,768 | 2.29 |
| 2016 | 142,200 | 58,589 | 2.43 |
| 2017 | 54,200 | 75,080 | 0.72 |
| 2018 | 359,200 | 204,266 | 1.76 |
| 2019 | 274,200 | 97,698 | 2.81 |
| 2020 | 186,600 | 143,338 | 1.30 |
| 2021 | 181,500 | 178,952 | 1.01 |
| 2022 | 200,100 | 165,776 | 1.21 |
| 2023 | 103,800 | 128,234 | 0.81 |
| 2024[c/] | 180,700 | 92,172 | 1.96 |
| 2025[c/] | 82,700 | 166,398 | 0.50 |
| 2026 | 176,200 | -- | -- |

a/ Original preseason forecasts for years 1985-2001 were for May 1 (t); converted to Sept. 1 (t-1) forecasts by dividing the May 1 (t) number by the assumed Sept. 1 (t-1) through May 1 (t) survival rate in those years: 0.5 age-3, 0.8 age-4, 0.8 age-5.

b/ A scalar of 0.75 was applied to the jack count to produce the forecast because, (1) most jacks returned to the Trinity River, and (2) the jack count was outside the database range.

c/ Postseason estimates are preliminary.

d/ Does not include age-5 adults.

TABLE II-5. Summary of management objectives and predictor performance for Klamath River fall Chinook.

| Average or Year (t) | Preseason Ocean Abundance Sept. 1 (t-1) Forecast[a/] | | Postseason Ocean Abundance Sept. 1 (t-1) Estimate | | Preseason Age-4 Harvest Rate Forecast[b/] | | Postseason Age-4 Harvest Rate Estimate[c/] | | Preseason Adult Harvest Forecast | | Postseason Adult Harvest Estimate | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Age-3 | Age-4 | Age-3 | Age-4 | Ocean | River | Ocean | River | Ocean | River | Ocean | River |
| 1986-90 | 447,640 | 144,880 | 677,548 | 199,729 | 0.30 | 0.51 | 0.44 | 0.54 | 104,100 | 56,020 | 214,598 | 51,814 |
| 1991-95 | 185,520 | 52,320 | 236,925 | 30,168 | 0.09 | 0.28 | 0.13 | 0.34 | 12,980 | 14,460 | 13,095 | 13,667 |
| 1996-00 | 262,960 | 97,220 | 246,677 | 81,693 | 0.11 | 0.44 | 0.10 | 0.33 | 30,500 | 44,180 | 21,336 | 31,382 |
| 2001 | 187,200 | 247,000 | 356,128 | 133,801 | 0.14 | 0.61 | 0.09 | 0.29 | 45,600 | 105,300 | 21,747 | 50,780 |
| 2002 | 209,000 | 143,800 | 513,604 | 98,927 | 0.13 | 0.57 | 0.15 | 0.26 | 30,000 | 70,900 | 28,896 | 35,069 |
| 2003 | 171,300 | 132,400 | 401,112 | 192,180 | 0.16 | 0.50 | 0.21 | 0.28 | 30,600 | 52,200 | 70,995 | 39,715 |
| 2004 | 72,100 | 134,500 | 159,446 | 105,246 | 0.15 | 0.38 | 0.35 | 0.48 | 26,500 | 35,800 | 64,226 | 29,807 |
| 2005 | 185,700 | 48,900 | 189,977 | 38,079 | 0.08 | 0.16 | 0.20 | 0.19 | 7,100 | 9,600 | 12,807 | 10,001 |
| 2006 | 44,100 | 63,700 | 90,666 | 63,384 | 0.11 | 0.23 | 0.10 | 0.18 | 10,000 | 10,000 | 10,401 | 10,345 |
| 2007 | 515,400 | 26,100 | 376,940 | 33,650 | 0.16 | 0.63 | 0.21 | 0.56 | 30,200 | 51,400 | 30,275 | 33,884 |
| 2008 | 31,600 | 157,200 | 68,015 | 81,411 | 0.02 | 0.43 | 0.10 | 0.38 | 4,500 | 49,500 | 8,716 | 24,180 |
| 2009 | 474,900 | 25,200 | 240,787 | 21,131 | 0.00 | 0.57 | 0.00 | 0.40 | 100 | 61,700 | 53 | 34,040 |
| 2010 | 223,400 | 106,300 | 192,750 | 62,089 | 0.12 | 0.49 | 0.04 | 0.40 | 22,600 | 46,600 | 4,489 | 32,920 |
| 2011 | 304,600 | 61,600 | 240,222 | 64,570 | 0.16 | 0.54 | 0.08 | 0.34 | 26,900 | 42,700 | 12,011 | 30,502 |
| 2012 | 1,567,600 | 79,600 | 799,446 | 74,300 | 0.16 | 0.77 | 0.08 | 0.51 | 92,400 | 227,600 | 34,719 | 109,263 |
| 2013 | 390,700 | 331,200 | 438,443 | 194,407 | 0.16 | 0.62 | 0.20 | 0.51 | 74,800 | 154,800 | 59,511 | 82,835 |
| 2014 | 219,800 | 67,400 | 216,493 | 180,669 | 0.16 | 0.40 | 0.17 | 0.25 | 23,200 | 31,400 | 40,158 | 31,353 |
| 2015 | 342,200 | 71,100 | 110,506 | 60,979 | 0.16 | 0.59 | 0.22 | 0.47 | 29,400 | 57,700 | 20,019 | 35,890 |
| 2016 | 93,400 | 45,100 | 32,670 | 24,777 | 0.08 | 0.19 | 0.09 | 0.31 | 6,300 | 8,500 | 3,025 | 6,470 |
| 2017 | 42,000 | 10,600 | 63,235 | 9,821 | 0.03 | 0.06 | 0.04 | 0.08 | 700 | 900 | 1,783 | 1,951 |
| 2018 | 330,000 | 28,400 | 193,685 | 10,531 | 0.12 | 0.34 | 0.24 | 0.36 | 14,600 | 21,600 | 13,227 | 18,879 |
| 2019 | 167,500 | 106,100 | 81,818 | 15,660 | 0.16 | 0.47 | 0.36 | 0.38 | 24,800 | 40,000 | 8,677 | 11,365 |
| 2020 | 149,600 | 36,200 | 129,077 | 14,237 | 0.09 | 0.22 | 0.23 | 0.37 | 7,300 | 9,900 | 4,708 | 10,335 |
| 2021 | 135,600 | 45,100 | 142,822 | 35,729 | 0.11 | 0.19 | 0.28 | 0.22 | 6,900 | 9,400 | 17,595 | 10,487 |
| 2022 | 155,000 | 43,200 | 126,917 | 38,314 | 0.10 | 0.22 | 0.39 | 0.31 | 7,300 | 11,600 | 23,637 | 10,496 |
| 2023[d/] | 75,300 | 27,200 | 94,023 | 33,104 | 0.00 | 0.10 | 0.00 | 0.04 | 100 | 3,700 | 47 | 2,144 |
| 2024[e/] | 138,700 | 39,500 | 75,871 | 15,271 | 0.02 | 0.19 | 0.02 | 0.29 | 1,400 | 11,400 | 726 | 7,385 |
| 2025 | 67,100 | 14,300 | 146,300 | 19,608 | 0.02 | 0.09 | 0.02 | 0.11 | 400 | 2,400 | 447 | 3,634 |
| 2026 | 157,300 | 18,300 | - | - | - | - | - | - | - | - | - | - |

a/ Original preseason forecasts for years 1990-2001 were for May 1 (t); converted to Sept. 1 (t-1) forecasts by dividing the May 1 (t) number by the assumed Sept. 1 (t-1) through May 1 (t) survival rate in those years: 0.5 age-3, 0.8 age-4, 0.8 age-5.

b/ Ocean harvest rate forecast is the fraction of the predicted ocean abundance expected to be harvested Sept. 1 (t-1) through August 31(t). River harvest rate forecast is the fraction of the predicted river run expected to be harvested in river fisheries. Original ocean harvest rate forecasts for year (t), 1990-2001, were based on a May 1 (t) ocean abundance denominator; converted to Sept. 1 (t-1) abundance denominator by multiplying former values by 0.8 (assumed age-4 survival rate between Sept. 1 (t-1) and May 1 (t) in those years).

c/ Ocean harvest rate is the fraction of the postseason ocean abundance harvested Sept. 1 (t-1) through August 31 (t). River harvest rate is the fraction of the river run harvested by river fisheries.

d/ Postseason estimates are preliminary for age-3.

e/ Postseason estimates are preliminary for age-3 and age-4.

TABLE II-6. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 1 of 4)

| Year (t) or Average | Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) ) | | | | | | | River Fisheries (t) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | KMZ | | | North of KMZ | South of KMZ | Subtotal | Ocean Total | Net | Sport | Total |
| | Troll | Sport | Subtotal | | | | | | | |
| | | | | | **HARVEST (numbers of fish)** | | | | | |
| **Age-3** | | | | | | | | | | |
| 1986-90 | 15,081 | 6,253 | 21,334 | 38,683 | 64,397 | 103,080 | 124,414 | 7,200 | 9,480 | 16,680 |
| 1991-95 | 8 | 689 | 698 | 3,055 | 5,086 | 8,141 | 8,839 | 4,980 | 2,189 | 7,170 |
| 1996-00 | 93 | 740 | 833 | 2,157 | 7,326 | 9,483 | 10,316 | 8,840 | 3,764 | 12,604 |
| 2001 | 113 | 105 | 218 | 2,749 | 6,082 | 8,831 | 9,049 | 17,885 | 7,294 | 25,179 |
| 2002 | 220 | 784 | 1,004 | 1,501 | 9,916 | 11,417 | 12,421 | 11,734 | 6,258 | 17,992 |
| 2003 | 176 | 669 | 845 | 1,921 | 27,586 | 29,507 | 30,352 | 6,996 | 5,061 | 12,057 |
| 2004 | 402 | 970 | 1,372 | 9,710 | 7,324 | 17,034 | 18,406 | 4,679 | 2,051 | 6,730 |
| 2005 | 0 | 568 | 568 | 619 | 2,381 | 3,000 | 3,568 | 4,394 | 1,641 | 6,035 |
| 2006 | 0 | 478 | 478 | 32 | 341 | 373 | 851 | 2,388 | 13 | 2,401 |
| 2007 | 770 | 8,101 | 8,871 | 4,194 | 9,366 | 13,560 | 22,431 | 17,543 | 5,734 | 23,277 |
| 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,225 | 608 | 3,833 |
| 2009 | 0 | 53 | 53 | 0 | 0 | 0 | 53 | 19,820 | 4,715 | 24,535 |
| 2010 | 106 | 28 | 134 | 0 | 1,664 | 1,664 | 1,798 | 13,132 | 1,884 | 15,016 |
| 2011 | 334 | 1,119 | 1,453 | 48 | 4,829 | 4,877 | 6,330 | 13,286 | 2,630 | 15,916 |
| 2012 | 1,116 | 11,350 | 12,466 | 928 | 13,089 | 14,017 | 26,483 | 70,409 | 12,104 | 82,513 |
| 2013 | 390 | 5,574 | 5,964 | 868 | 12,053 | 12,921 | 18,885 | 18,996 | 7,675 | 26,671 |
| 2014 | 0 | 566 | 566 | 4,144 | 1,550 | 5,694 | 6,260 | 3,386 | 1,778 | 5,164 |
| 2015 | 48 | 293 | 341 | 652 | 1,597 | 2,249 | 2,590 | 10,604 | 4,509 | 15,113 |
| 2016 | 0 | 0 | 0 | 14 | 308 | 322 | 322 | 918 | 430 | 1,348 |
| 2017 | 0 | 0 | 0 | 115 | 1,263 | 1,378 | 1,378 | 1,261 | 23 | 1,284 |
| 2018 | 1,511 | 1,628 | 3,139 | 3,960 | 3,577 | 7,537 | 10,676 | 12,954 | 3,931 | 16,885 |
| 2019 | 157 | 371 | 528 | 181 | 2,391 | 2,572 | 3,100 | 4,089 | 4,656 | 8,745 |
| 2020 | 0 | 44 | 44 | 46 | 1,260 | 1,306 | 1,350 | 2,997 | 4,554 | 7,551 |
| 2021 | 0 | 281 | 281 | 784 | 6,694 | 7,478 | 7,759 | 4,648 | 1,803 | 6,451 |
| 2022 | 0 | 446 | 446 | 13 | 7,875 | 7,888 | 8,334 | 3,947 | 1,976 | 5,923 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,151 | 53 | 1,204 |
| 2024 | 0 | 0 | 0 | 42 | 0 | 42 | 42 | 3,601 | 113 | 3,714 |
| 2025 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,056 | 22 | 2,078 |

TABLE II-6. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 2 of 4)

| Year (t) or Average | Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) ) KMZ Troll | KMZ Sport | KMZ Subtotal | North of KMZ | South of KMZ | Subtotal | Ocean Total | River Fisheries (t) Net | River Fisheries (t) Sport | River Fisheries (t) Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **HARVEST (numbers of fish)** | | | | | |
| **Age-4** | | | | | | | | | | |
| 1986-90 | 10,282 | 4,358 | 14,640 | 38,450 | 31,653 | 70,103 | 84,743 | 28,720 | 5,500 | 34,220 |
| 1991-95 | 34 | 484 | 519 | 1,438 | 1,807 | 3,245 | 3,764 | 5,072 | 856 | 5,928 |
| 1996-00 | 200 | 1,002 | 1,202 | 3,833 | 5,093 | 8,926 | 10,128 | 15,076 | 2,948 | 18,023 |
| 2001 | 1,312 | 1,604 | 2,916 | 5,819 | 3,926 | 9,745 | 12,661 | 20,759 | 4,819 | 25,578 |
| 2002 | 1,938 | 827 | 2,765 | 2,811 | 9,416 | 12,227 | 14,992 | 11,929 | 4,063 | 15,992 |
| 2003 | 834 | 919 | 1,753 | 7,856 | 30,011 | 37,867 | 39,620 | 22,754 | 4,592 | 27,346 |
| 2004 | 1,429 | 1,234 | 2,663 | 11,645 | 22,132 | 33,777 | 36,440 | 17,623 | 1,751 | 19,374 |
| 2005 | 247 | 317 | 564 | 5,243 | 1,909 | 7,152 | 7,716 | 3,048 | 304 | 3,352 |
| 2006 | 196 | 725 | 921 | 4,192 | 985 | 5,177 | 6,098 | 7,569 | 42 | 7,611 |
| 2007 | 270 | 2,336 | 2,606 | 2,019 | 2,472 | 4,491 | 7,097 | 8,987 | 502 | 9,489 |
| 2008 | 6,378 | 1,105 | 7,483 | 581 | 113 | 694 | 8,177 | 17,891 | 1,260 | 19,151 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,831 | 706 | 6,537 |
| 2010 | 36 | 113 | 149 | 889 | 1,482 | 2,371 | 2,520 | 16,630 | 1,134 | 17,764 |
| 2011 | 417 | 175 | 592 | 1,045 | 3,780 | 4,825 | 5,417 | 12,587 | 1,466 | 14,053 |
| 2012 | 334 | 2,085 | 2,419 | 759 | 2,960 | 3,719 | 6,138 | 23,285 | 1,718 | 25,003 |
| 2013 | 4,277 | 6,236 | 10,513 | 4,054 | 23,994 | 28,048 | 38,561 | 43,671 | 12,043 | 55,714 |
| 2014 | 1,292 | 1,434 | 2,726 | 19,822 | 8,977 | 28,799 | 31,525 | 21,303 | 3,404 | 24,707 |
| 2015 | 273 | 197 | 470 | 5,763 | 7,127 | 12,890 | 13,360 | 13,160 | 2,692 | 15,852 |
| 2016 | 0 | 56 | 56 | 633 | 1,571 | 2,204 | 2,260 | 3,966 | 870 | 4,836 |
| 2017 | 0 | 124 | 124 | 98 | 183 | 281 | 405 | 503 | 43 | 546 |
| 2018 | 637 | 91 | 728 | 927 | 852 | 1,779 | 2,507 | 1,815 | 179 | 1,994 |
| 2019 | 670 | 47 | 717 | 1,075 | 3,779 | 4,854 | 5,571 | 1,860 | 716 | 2,576 |
| 2020 | 53 | 0 | 53 | 228 | 3,064 | 3,292 | 3,345 | 2,209 | 568 | 2,777 |
| 2021 | 0 | 238 | 238 | 754 | 8,843 | 9,597 | 9,835 | 3,353 | 605 | 3,958 |
| 2022 | 0 | 331 | 331 | 651 | 13,970 | 14,621 | 14,952 | 4,003 | 485 | 4,488 |
| 2023 | 0 | 14 | 14 | 0 | 32 | 32 | 46 | 938 | 0 | 938 |
| 2024 | 0 | 0 | 0 | 356 | 0 | 356 | 356 | 3,226 | 23 | 3,249 |
| 2025 | 0 | 0 | 0 | 436 | 0 | 436 | 436 | 1,500 | 0 | 1,500 |

TABLE II-6. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 3 of 4)

| Year (t) or Average | Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) ) | | | | | | | River Fisheries (t) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | KMZ | | | North of KMZ | South of KMZ | Subtotal | Ocean Total | | | |
| | Troll | Sport | Subtotal | | | | | Net | Sport | Total |
| | | | | | **HARVEST RATE**[b/] | | | | | |
| **Age-3** | | | | | | | | | | |
| 1986-90 | 0.02 | 0.01 | 0.03 | 0.08 | 0.09 | 0.17 | 0.20 | 0.09 | 0.11 | 0.20 |
| 1991-95 | 0.00 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.03 | 0.13 | 0.06 | 0.18 |
| 1996-00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.03 | 0.03 | 0.14 | 0.07 | 0.21 |
| 2001 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.02 | 0.03 | 0.18 | 0.07 | 0.25 |
| 2002 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 | 0.02 | 0.12 | 0.07 | 0.19 |
| 2003 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.07 | 0.08 | 0.07 | 0.05 | 0.13 |
| 2004 | 0.00 | 0.01 | 0.01 | 0.06 | 0.05 | 0.11 | 0.12 | 0.14 | 0.06 | 0.20 |
| 2005 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.02 | 0.10 | 0.04 | 0.14 |
| 2006 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.13 | 0.00 | 0.13 |
| 2007 | 0.00 | 0.02 | 0.02 | 0.01 | 0.02 | 0.04 | 0.06 | 0.15 | 0.05 | 0.20 |
| 2008 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.17 | 0.03 | 0.21 |
| 2009 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.06 | 0.31 |
| 2010 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.28 | 0.04 | 0.33 |
| 2011 | 0.00 | 0.00 | 0.01 | 0.00 | 0.02 | 0.02 | 0.03 | 0.23 | 0.04 | 0.27 |
| 2012 | 0.00 | 0.01 | 0.02 | 0.00 | 0.02 | 0.02 | 0.03 | 0.29 | 0.05 | 0.34 |
| 2013 | 0.00 | 0.01 | 0.01 | 0.00 | 0.03 | 0.03 | 0.04 | 0.34 | 0.14 | 0.48 |
| 2014 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 0.03 | 0.03 | 0.06 | 0.03 | 0.09 |
| 2015 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.02 | 0.29 | 0.12 | 0.41 |
| 2016 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.11 | 0.05 | 0.16 |
| 2017 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 | 0.02 | 0.05 | 0.00 | 0.05 |
| 2018 | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.04 | 0.06 | 0.15 | 0.05 | 0.20 |
| 2019 | 0.00 | 0.00 | 0.01 | 0.00 | 0.03 | 0.03 | 0.04 | 0.14 | 0.15 | 0.29 |
| 2020 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.08 | 0.12 | 0.20 |
| 2021 | 0.00 | 0.00 | 0.00 | 0.01 | 0.05 | 0.05 | 0.05 | 0.13 | 0.05 | 0.18 |
| 2022 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.06 | 0.07 | 0.12 | 0.06 | 0.18 |
| 2023 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.03 |
| 2024[a/] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 0.15 |
| 2025[a/] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.06 |

TABLE II-6. Harvest levels and rates of age-3 and age-4 Klamath River fall Chinook. (Page 4 of 4)

| Year (t) or Average | Ocean Fisheries (Sept. 1 (t-1) - Aug. 31 (t) ) | | | | | | | River Fisheries (t) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | KMZ | | | North of KMZ | South of KMZ | Subtotal | Ocean Total | | | |
| | Troll | Sport | Subtotal | | | | | Net | Sport | Total |
| | | | | | **HARVEST RATE**[b/] | | | | | |
| **Age-4** | | | | | | | | | | |
| 1986-90 | 0.05 | 0.02 | 0.07 | 0.21 | 0.16 | 0.37 | 0.44 | 0.45 | 0.09 | 0.54 |
| 1991-95 | 0.00 | 0.01 | 0.01 | 0.05 | 0.06 | 0.11 | 0.13 | 0.29 | 0.04 | 0.34 |
| 1996-00 | 0.00 | 0.01 | 0.01 | 0.05 | 0.04 | 0.09 | 0.10 | 0.28 | 0.05 | 0.33 |
| 2001 | 0.01 | 0.01 | 0.02 | 0.04 | 0.03 | 0.07 | 0.09 | 0.24 | 0.05 | 0.29 |
| 2002 | 0.02 | 0.01 | 0.03 | 0.03 | 0.10 | 0.12 | 0.15 | 0.19 | 0.06 | 0.26 |
| 2003 | 0.00 | 0.00 | 0.01 | 0.04 | 0.16 | 0.20 | 0.21 | 0.24 | 0.05 | 0.28 |
| 2004 | 0.01 | 0.01 | 0.03 | 0.11 | 0.21 | 0.32 | 0.35 | 0.43 | 0.04 | 0.48 |
| 2005 | 0.01 | 0.01 | 0.01 | 0.14 | 0.05 | 0.19 | 0.20 | 0.17 | 0.02 | 0.19 |
| 2006 | 0.00 | 0.01 | 0.01 | 0.07 | 0.02 | 0.08 | 0.10 | 0.18 | 0.00 | 0.18 |
| 2007 | 0.01 | 0.07 | 0.08 | 0.06 | 0.07 | 0.13 | 0.21 | 0.53 | 0.03 | 0.56 |
| 2008 | 0.08 | 0.01 | 0.09 | 0.01 | 0.00 | 0.01 | 0.10 | 0.36 | 0.03 | 0.38 |
| 2009 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 | 0.04 | 0.40 |
| 2010 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.04 | 0.04 | 0.37 | 0.03 | 0.40 |
| 2011 | 0.01 | 0.00 | 0.01 | 0.02 | 0.06 | 0.07 | 0.08 | 0.31 | 0.04 | 0.34 |
| 2012 | 0.00 | 0.03 | 0.03 | 0.01 | 0.04 | 0.05 | 0.08 | 0.47 | 0.03 | 0.51 |
| 2013 | 0.02 | 0.03 | 0.05 | 0.02 | 0.12 | 0.14 | 0.20 | 0.40 | 0.11 | 0.51 |
| 2014 | 0.01 | 0.01 | 0.02 | 0.11 | 0.05 | 0.16 | 0.17 | 0.22 | 0.03 | 0.25 |
| 2015 | 0.00 | 0.00 | 0.01 | 0.09 | 0.12 | 0.21 | 0.22 | 0.39 | 0.08 | 0.47 |
| 2016 | 0.00 | 0.00 | 0.00 | 0.03 | 0.06 | 0.09 | 0.09 | 0.26 | 0.06 | 0.31 |
| 2017 | 0.00 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.04 | 0.07 | 0.01 | 0.08 |
| 2018 | 0.06 | 0.01 | 0.07 | 0.09 | 0.08 | 0.17 | 0.24 | 0.33 | 0.03 | 0.36 |
| 2019 | 0.04 | 0.00 | 0.05 | 0.07 | 0.24 | 0.31 | 0.36 | 0.27 | 0.10 | 0.38 |
| 2020 | 0.00 | 0.00 | 0.00 | 0.02 | 0.22 | 0.23 | 0.23 | 0.29 | 0.07 | 0.37 |
| 2021 | 0.00 | 0.01 | 0.01 | 0.02 | 0.25 | 0.27 | 0.28 | 0.19 | 0.03 | 0.22 |
| 2022 | 0.00 | 0.01 | 0.01 | 0.02 | 0.36 | 0.38 | 0.39 | 0.28 | 0.03 | 0.31 |
| 2023 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.04 |
| 2024 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.02 | 0.02 | 0.29 | 0.00 | 0.29 |
| 2025[a/] | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.02 | 0.02 | 0.11 | 0.00 | 0.11 |

a/ Preliminary (incomplete cohort).

b/ Ocean harvest rates are the fraction of Sept. 1 (t-1) ocean abundance harvested in these fisheries. River harvest rates are the fraction of the river run (t) harvested in these fisheries.

TABLE II-7. Rogue River fall Chinook inriver run and ocean population indices.

| Return Year | Inriver Run Index in Thousands of Fish[a/] | | | | | Ocean Harvest Rate by Age[b/] | | Rogue Ocean Population Index (ROPI) in Thousands of Fish[c/d/] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Age-2 | Age-3 | Age-4 | Age-5-6 | Total[d/] | Age-3 | Age-4-6 | Age-3 | Age-4 | Age-5-6 | Total |
| 1977-80 | 1.0 | 2.3 | 2.2 | 0.2 | 5.7 | 0.23 | 0.55 | 14.1 | 6.5 | 0.5 | 21.1 |
| 1981-85 | 21.4 | 17.6 | 22.9 | 2.3 | 64.1 | 0.18 | 0.45 | 197.5 | 60.0 | 16.6 | 274.1 |
| 1986-90 | 30.8 | 47.2 | 37.5 | 4.5 | 120.0 | 0.20 | 0.44 | 485.0 | 112.0 | 30.3 | 627.2 |
| 1991-95 | 16.7 | 28.9 | 17.2 | 3.5 | 66.4 | 0.03 | 0.13 | 165.1 | 51.2 | 11.8 | 228.1 |
| 1996-00 | 15.1 | 31.2 | 18.2 | 4.6 | 69.1 | 0.03 | 0.10 | 199.1 | 66.6 | 13.6 | 279.3 |
| 2001 | 27.9 | 29.5 | 33.9 | 16.6 | 107.9 | 0.03 | 0.09 | 164.8 | 146.2 | 18.6 | 329.6 |
| 2002 | 43.8 | 64.1 | 63.1 | 30.6 | 201.6 | 0.02 | 0.15 | 337.9 | 70.0 | 28.4 | 436.3 |
| 2003 | 20.1 | 66.9 | 99.0 | 47.0 | 233.0 | 0.08 | 0.21 | 530.4 | 151.9 | 52.2 | 734.5 |
| 2004 | 20.3 | 30.6 | 69.5 | 35.4 | 155.8 | 0.12 | 0.34 | 243.3 | 158.4 | 82.5 | 484.2 |
| 2005[f/] | 5.0 | 17.7 | 28.7 | 11.6 | 63.0 | 0.02 | 0.20 | 245.2 | 72.6 | 58.2 | 376.0 |
| 2006 | 7.4 | 11.6 | 19.6 | 7.1 | 45.7 | 0.01 | 0.10 | 60.4 | 42.1 | 23.5 | 126.0 |
| 2007 | 3.4 | 15.8 | 16.6 | 12.7 | 48.5 | 0.06 | 0.21 | 89.5 | 27.5 | 15.8 | 132.8 |
| 2008 | 16.2 | 7.6 | 14.1 | 4.2 | 42.1 | 0.00 | 0.10 | 41.3 | 37.6 | 15.4 | 94.3 |
| 2009 | 15.2 | 34.3 | 28.0 | 4.5 | 82.0 | 0.00 | 0.00 | 195.9 | 18.0 | 11.4 | 225.3 |
| 2010 | 15.1 | 23.6 | 26.5 | 2.7 | 67.9 | 0.01 | 0.04 | 183.4 | 81.3 | 21.5 | 286.2 |
| 2011 | 31.9 | 25.1 | 41.1 | 5.5 | 103.6 | 0.03 | 0.08 | 183.2 | 56.0 | 19.9 | 259.1 |
| 2012 | 11.0 | 39.9 | 28.0 | 5.3 | 84.2 | 0.03 | 0.08 | 385.6 | 59.4 | 31.2 | 476.2 |
| 2013 | 24.3 | 17.0 | 66.1 | 3.1 | 110.5 | 0.04 | 0.20 | 133.4 | 94.5 | 21.7 | 249.6 |
| 2014 | 12.5 | 20.5 | 29.2 | 6.7 | 68.9 | 0.03 | 0.17 | 295.5 | 40.5 | 49.0 | 385.0 |
| 2015 | 8.5 | 6.8 | 23.1 | 3.0 | 41.4 | 0.02 | 0.22 | 151.5 | 48.5 | 22.8 | 222.8 |
| 2016 | 17.7 | 8.1 | 17.7 | 2.9 | 46.4 | 0.01 | 0.09 | 102.6 | 16.2 | 17.6 | 136.4 |
| 2017 | 25.0 | 58.6 | 24.4 | 12.7 | 120.7 | 0.02 | 0.04 | 214.0 | 19.2 | 13.6 | 246.8 |
| 2018 | 23.9 | 27.7 | 11.4 | 0.4 | 63.4 | 0.06 | 0.24 | 303.0 | 138.8 | 21.0 | 462.8 |
| 2019 | 17.1 | 14.1 | 6.0 | 0.1 | 37.3 | 0.04 | 0.36 | 305.5 | 69.2 | 8.7 | 383.6 |
| 2020 | 16.6 | 22.9 | 7.6 | 0.1 | 47.2 | 0.01 | 0.23 | 207.1 | 33.5 | 4.3 | 244.9 |
| 2021 | 14.3 | 21.8 | 27.0 | 1.9 | 65.0 | 0.05 | 0.28 | 200.7 | 54.2 | 5.5 | 260.5 |
| 2022 | 15.4 | 11.4 | 7.4 | 0.9 | 35.0 | 0.06 | 0.38 | 173.4 | 51.7 | 20.0 | 245.1 |
| 2023 | 12.8 | 15.1 | 13.9 | 3.6 | 45.4 | 0.00 | 0.00 | 185.8 | 26.9 | 5.6 | 218.4 |
| 2024 | 13.0 | 15.4 | 41.2 | 3.1 | 72.6 | - | 0.02 | 155.2 | 35.7 | 11.1 | 202.0 |
| 2025 | 28.4 | 35.0 | 37.3 | 12.6 | 113.3 | - | - | 157.2 [e/] | 36.4 [e/] | 30.7 [e/] | 224.4 [e/] |
| 2026 | NA | NA | NA | NA | NA | - | - | 171.5 [f/] | 66.2 [f/] | 24.3 [f/] | 262.0 [f/] |

a/ Huntley Park passage estimate and estuary harvest. Age composition from Huntley Park scale analysis.

b/ Exploitation rates since 1981 are based on Klamath River fall Chinook cohort analysis.

c/ Based on cohort reconstruction methods. Index values predicted from regression equations; postseason estimates are not available.

d/ Rogue ocean abundances initially reconstructed to May 1 (t); converted to Sept. 1 (t-1) forecasts by dividing the May 1 (t) number by the assumed Sept. 1 (t-1) through May 1 (t) survival rate: 0.5 age-3, 0.8 age-4, 0.8 age-5, 0.8 age-6.

e/ Preliminary (incomplete cohort).

f/ Preseason forecast.

TABLE II-8. Predicted and postseason returns of Columbia River adult summer and fall Chinook in thousands of fish. (Page 1 of 3)

| Year or Average | March Preseason Forecast[a/] | April STT Modeled Forecast[b/] | Postseason Return | March Pre/Postseason | April Pre/Postseason |
|---|---|---|---|---|---|
| | | | **URB** | | |
| 1984-85 | 124.6 | 126.1 | 163.9 | 0.75 | 0.76 |
| 1986-90 | 306.8 | 305.5 | 291.4 | 1.02 | 1.02 |
| 1991-95 | 86.2 | 91.5 | 105.3 | 0.83 | 0.87 |
| 1996-00 | 144.9 | 140.9 | 153.8 | 0.94 | 0.92 |
| 2001-05 | 266.6 | 260.3 | 303.9 | 0.88 | 0.87 |
| 2006 | 253.9 | 249.1 | 230.4 | 1.10 | 1.08 |
| 2007 | 182.4 | 185.2 | 112.6 | 1.62 | 1.64 |
| 2008 | 162.5 | 165.9 | 196.9 | 0.83 | 0.84 |
| 2009 | 259.9 | 269.8 | 212.0 | 1.23 | 1.27 |
| 2010 | 310.8 | 319.1 | 324.9 | 0.96 | 0.98 |
| 2011 | 398.2 | 399.5 | 324.1 | 1.23 | 1.23 |
| 2012 | 353.5 | 353.0 | 298.1 | 1.19 | 1.18 |
| 2013 | 432.5 | 434.7 | 784.1 | 0.55 | 0.55 |
| 2014 | 973.3 | 919.4 | 684.2 | 1.42 | 1.34 |
| 2015 | 500.3 | 516.2 | 795.9 | 0.63 | 0.65 |
| 2016 | 589.0 | 579.4 | 406.6 | 1.45 | 1.42 |
| 2017 | 260.0 | 275.1 | 297.1 | 0.88 | 0.93 |
| 2018 | 200.1 | 205.8 | 149.0 | 1.34 | 1.38 |
| 2019 | 158.4 | 162.6 | 212.2 | 0.75 | 0.77 |
| 2020 | 233.4 | 227.0 | 299.3 | 0.78 | 0.76 |
| 2021 | 354.2 | 349.2 | 239.9 | 1.48 | 1.46 |
| 2022 | 230.4 | 229.6 | 254.9 | 0.90 | 0.90 |
| 2023 | 272.4 | 278.5 | 339.0 | 0.80 | 0.82 |
| 2024 | 258.3 | 261.9 | 318.1 | 0.81 | 0.82 |
| 2025[c/] | 313.4 | 328.2 | 290.4 | 1.08 | 1.13 |
| 2026 | 281.6 | - | - | - | - |
| | | | **LRW** | | |
| 1984-85 | 14.8 | NA | 13.3 | 1.11 | NA |
| 1986-90 | 27.8 | 30.8 | 32.6 | 0.86 | 0.95 |
| 1991-95 | 13.9 | 13.2 | 14.8 | 0.99 | 0.93 |
| 1996-00 | 6.1 | 5.5 | 9.5 | 0.69 | 0.62 |
| 2001-05 | 20.9 | 21.2 | 21.1 | 1.01 | 1.03 |
| 2006 | 16.6 | 16.6 | 18.1 | 0.92 | 0.92 |
| 2007 | 10.1 | 10.0 | 4.3 | 2.35 | 2.33 |
| 2008 | 3.8 | 3.8 | 7.1 | 0.54 | 0.54 |
| 2009 | 8.5 | 8.6 | 7.5 | 1.13 | 1.15 |
| 2010 | 9.7 | 10.0 | 10.9 | 0.89 | 0.92 |
| 2011 | 12.5 | 13.1 | 15.2 | 0.82 | 0.86 |
| 2012 | 16.2 | 16.2 | 13.9 | 1.17 | 1.17 |
| 2013 | 14.2 | 14.3 | 25.8 | 0.55 | 0.55 |
| 2014 | 34.2 | 33.4 | 25.8 | 1.33 | 1.29 |
| 2015 | 18.9 | 19.4 | 32.4 | 0.58 | 0.60 |
| 2016 | 22.2 | 22.4 | 13.0 | 1.71 | 1.72 |
| 2017 | 12.5 | 13.6 | 7.8 | 1.60 | 1.74 |
| 2018 | 7.6 | 7.9 | 8.3 | 0.92 | 0.95 |
| 2019 | 13.7 | 14.1 | 16.6 | 0.83 | 0.85 |
| 2020 | 19.7 | 19.2 | 35.4 | 0.56 | 0.54 |
| 2021 | 20.0 | 20.4 | 16.9 | 1.18 | 1.21 |
| 2022 | 10.8 | 10.9 | 9.4 | 1.15 | 1.16 |
| 2023 | 8.6 | 8.7 | 11.4 | 0.75 | 0.76 |
| 2024 | 10.5 | 10.5 | 15.1 | 0.70 | 0.70 |
| 2025[c/] | 14.2 | 14.5 | 19.8 | 0.72 | 0.73 |
| 2026 | 15.8 | - | - | - | - |

TABLE II-8. Predicted and postseason returns of Columbia River adult summer and fall Chinook in thousands of fish. (Page 2 of 3)

| Year | March Preseason Forecast[a/] | April STT Modeled Forecast[b/] | Postseason Return | March Pre/Postseason | April Pre/Postseason |
|---|---|---|---|---|---|
| | | | **LRH** | | |
| 1984-85 | 76.0 | 87.9 | 106.7 | 0.71 | 0.83 |
| 1986-90 | 209.8 | 204.2 | 234.9 | 0.91 | 0.88 |
| 1991-95 | 67.2 | 72.2 | 55.5 | 1.18 | 1.27 |
| 1996-00 | 33.9 | 40.8 | 49.0 | 0.72 | 0.85 |
| 2001-05 | 87.4 | 87.6 | 118.6 | 0.72 | 0.73 |
| 2006 | 55.8 | 57.5 | 58.3 | 0.96 | 0.99 |
| 2007 | 54.9 | 54.4 | 32.7 | 1.68 | 1.66 |
| 2008 | 59.0 | 55.9 | 60.3 | 0.98 | 0.93 |
| 2009 | 88.8 | 88.2 | 76.7 | 1.16 | 1.15 |
| 2010 | 90.6 | 85.6 | 103.0 | 0.88 | 0.83 |
| 2011 | 133.5 | 128.9 | 109.0 | 1.22 | 1.18 |
| 2012 | 127.0 | 128.4 | 84.8 | 1.50 | 1.51 |
| 2013 | 88.0 | 87.4 | 103.2 | 0.85 | 0.85 |
| 2014 | 110.0 | 100.7 | 101.8 | 1.08 | 0.99 |
| 2015 | 94.9 | 96.8 | 128.7 | 0.74 | 0.75 |
| 2016 | 133.7 | 142.5 | 81.9 | 1.63 | 1.74 |
| 2017 | 92.4 | 98.8 | 64.6 | 1.43 | 1.53 |
| 2018 | 62.4 | 63.9 | 50.4 | 1.24 | 1.27 |
| 2019 | 54.5 | 55.1 | 48.9 | 1.11 | 1.13 |
| 2020 | 51.0 | 50.0 | 77.9 | 0.65 | 0.64 |
| 2021 | 73.1 | 73.8 | 74.7 | 0.98 | 0.99 |
| 2022 | 73.0 | 73.6 | 87.5 | 0.83 | 0.84 |
| 2023 | 77.1 | 77.0 | 87.1 | 0.89 | 0.88 |
| 2024 | 85.5 | 85.4 | 114.4 | 0.75 | 0.75 |
| 2025[c/] | 121.5 | 121.8 | 115.4 | 1.05 | 1.06 |
| 2026 | 118.6 | - | - | - | - |
| | | | **SCH** | | |
| 1984-85 | 28.1 | 32.1 | 40.4 | 0.75 | 0.84 |
| 1986-90 | 17.7 | 15.6 | 16.7 | 1.01 | 0.92 |
| 1991-95 | 31.0 | 34.5 | 30.2 | 1.05 | 1.18 |
| 1996-00 | 30.3 | 32.6 | 30.3 | 0.94 | 1.05 |
| 2001-05 | 110.0 | 113.1 | 148.5 | 0.76 | 0.78 |
| 2006 | 50.0 | 51.8 | 27.9 | 1.79 | 1.86 |
| 2007 | 21.8 | 21.3 | 14.5 | 1.50 | 1.47 |
| 2008 | 87.2 | 86.2 | 93.8 | 0.93 | 0.92 |
| 2009 | 59.3 | 56.5 | 49.0 | 1.21 | 1.15 |
| 2010 | 169.0 | 162.9 | 128.6 | 1.31 | 1.27 |
| 2011 | 116.4 | 116.7 | 70.5 | 1.65 | 1.66 |
| 2012 | 63.8 | 60.0 | 56.9 | 1.12 | 1.05 |
| 2013 | 38.0 | 36.7 | 86.7 | 0.44 | 0.42 |
| 2014 | 115.1 | 103.3 | 127.0 | 0.91 | 0.81 |
| 2015 | 160.5 | 163.9 | 166.4 | 0.96 | 0.98 |
| 2016 | 89.5 | 100.7 | 41.4 | 2.16 | 2.43 |
| 2017 | 158.4 | 164.4 | 48.1 | 3.29 | 3.42 |
| 2018 | 50.1 | 51.4 | 28.9 | 1.73 | 1.78 |
| 2019 | 46.0 | 48.4 | 29.0 | 1.59 | 1.67 |
| 2020 | 46.2 | 45.5 | 52.3 | 0.88 | 0.87 |
| 2021 | 46.8 | 47.3 | 73.7 | 0.64 | 0.64 |
| 2022 | 91.2 | 92.2 | 258.3 | 0.35 | 0.36 |
| 2023 | 136.1 | 135.8 | 198.9 | 0.68 | 0.68 |
| 2024 | 129.8 | 129.4 | 129.0 | 1.01 | 1.00 |
| 2025[c/] | 184.7 | 183.5 | 126.1 | 1.46 | 1.46 |
| 2026 | 123.4 | - | - | - | - |

TABLE II-8. Predicted and postseason returns of Columbia River adult summer and fall Chinook in thousands of fish. (Page 3 of 3)

| Year | March Preseason Forecast[a/] | April STT Modeled Forecast[b/] | Postseason Return | March Pre/Postseason | April Pre/Postseason |
|---|---|---|---|---|---|
| | | | **MCB** | | |
| 1991-95 | 34.6 | 35.6 | 32.4 | 1.07 | 1.10 |
| 1996-00 | 49.9 | 47.9 | 48.6 | 1.07 | 1.04 |
| 2001-05 | 84.9 | 82.0 | 110.1 | 0.77 | 0.75 |
| 2006 | 88.3 | 86.6 | 80.4 | 1.10 | 1.08 |
| 2007 | 68.0 | 69.1 | 46.9 | 1.45 | 1.47 |
| 2008 | 54.0 | 55.1 | 75.5 | 0.72 | 0.73 |
| 2009 | 94.4 | 97.9 | 73.1 | 1.29 | 1.34 |
| 2010 | 79.0 | 74.6 | 79.0 | 1.00 | 0.94 |
| 2011 | 100.0 | 100.4 | 85.4 | 1.17 | 1.18 |
| 2012 | 90.8 | 90.7 | 58.7 | 1.55 | 1.55 |
| 2013 | 105.2 | 96.3 | 243.4 | 0.43 | 0.40 |
| 2014 | 360.1 | 340.2 | 203.8 | 1.77 | 1.67 |
| 2015 | 113.3 | 116.9 | 170.6 | 0.66 | 0.69 |
| 2016 | 99.0 | 99.4 | 87.8 | 1.13 | 1.13 |
| 2017 | 48.2 | 48.3 | 50.5 | 0.95 | 0.96 |
| 2018 | 42.0 | 41.2 | 50.2 | 0.84 | 0.82 |
| 2019 | 64.7 | 66.4 | 68.1 | 0.95 | 0.98 |
| 2020 | 79.7 | 77.5 | 109.0 | 0.73 | 0.71 |
| 2021 | 86.2 | 85.0 | 73.8 | 1.17 | 1.15 |
| 2022 | 78.9 | 78.6 | 67.7 | 1.17 | 1.16 |
| 2023 | 52.6 | 53.8 | 82.1 | 0.64 | 0.66 |
| 2024 | 63.4 | 64.3 | 87.6 | 0.72 | 0.73 |
| 2025[c/] | 83.3 | 87.2 | 130.9 | 0.64 | 0.67 |
| 2026 | 111.5 | - | - | - | - |
| | | | **SUMMER** | | |
| 2008 | 52.0 | | 55.5 | 0.94 | |
| 2009 | 70.7 | | 53.9 | 1.31 | |
| 2010 | 88.8 | | 72.3 | 1.23 | |
| 2011 | 91.1 | | 80.6 | 1.13 | |
| 2012 | 91.2 | 92.6 | 58.3 | 1.56 | 1.59 |
| 2013 | 73.5 | 78.5 | 67.6 | 1.09 | 1.16 |
| 2014 | 67.5 | 64.7 | 78.3 | 0.86 | 0.83 |
| 2015 | 73.0 | 100.1 | 126.9 | 0.58 | 0.79 |
| 2016 | 93.3 | 95.6 | 91.0 | 1.03 | 1.05 |
| 2017 | 63.1 | 64.8 | 68.2 | 0.93 | 0.95 |
| 2018 | 67.3 | 70.5 | 42.1 | 1.60 | 1.67 |
| 2019 | 35.9 | 36.3 | 34.6 | 1.04 | 1.05 |
| 2020 | 38.3 | 38.0 | 65.5 | 0.58 | 0.58 |
| 2021 | 77.6 | 78.8 | 56.8 | 1.37 | 1.39 |
| 2022 | 57.5 | 56.3 | 78.5 | 0.73 | 0.72 |
| 2023 | 84.8 | 85.4 | 54.7 | 1.55 | 1.56 |
| 2024 | 53.0 | 52.6 | 42.5 | 1.25 | 1.24 |
| 2025[c/] | 38.0 | 38.0 | 43.6 | 0.87 | 0.87 |
| 2026 | 41.0 | - | - | - | - |

a/ March preseason forecasts are ocean escapements based on terminal run size and stock-specific cohort relationships affected by the historical "normal" ocean fisheries, generally between 1979 and the most recent complete broods.

b/ STT-modeled forecasts adjust March preseason forecasts for Council-adopted ocean regulations each year, and should provide a more accurate estimate of expected ocean escapement.

c/ Postseason estimates are preliminary.

TABLE II-9. Preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.[a/] (Page 1 of 3)

| Year or Average | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Nooksack-Samish Hatchery and Natural** | | | **East Sound Bay Hatchery** | | | **Skagit [b/] Hatchery** | | | **Skagit Natural** | | |
| 1993-95 | 45.2 | 29.6 | 1.54 | 3.3 | 1.6 | 15.40 | 1.3 | 3.4 | 0.47 | 9.1 | 7.2 | 1.35 |
| 1996-00 | 27.0 | 39.1 | 0.70 | 2.1 | 0.5 | 9.58 | 0.2 | 0.3 | 0.38 | 7.0 | 10.8 | 0.81 |
| 2001 | 34.9 | 71.4 | 0.49 | 1.6 | 0.9 | 1.85 | 0.0 | 0.2 | 0.00 | 9.1 | 14.0 | 0.65 |
| 2002 | 52.8 | 62.5 | 0.84 | 1.6 | 0.9 | 1.87 | 0.0 | 0.1 | 0.00 | 13.8 | 19.8 | 0.70 |
| 2003 | 45.8 | 33.3 | 1.37 | 1.6 | 0.2 | 7.51 | 0.0 | 0.3 | 0.00 | 13.7 | 10.0 | 1.37 |
| 2004 | 34.2 | 18.1 | 1.89 | 0.8 | 0.0 | 400.00 | 0.5 | 0.2 | 2.16 | 20.3 | 24.0 | 0.85 |
| 2005 | 19.5 | 20.7 | 0.94 | 0.4 | 0.1 | 7.69 | 0.7 | 0.4 | 1.88 | 23.4 | 23.4 | 1.00 |
| 2006 | 16.9 | 38.5 | 0.44 | 0.4 | 0.0 | 26.67 | 0.6 | 0.4 | 1.51 | 24.1 | 22.4 | 1.08 |
| 2007 | 18.8 | 32.9 | 0.57 | 0.4 | 0.0 | - | 1.1 | 0.4 | 2.59 | 15.0 | 12.9 | 1.16 |
| 2008 | 35.3 | 33.7 | 1.05 | 0.8 | 0.0 | - | 0.7 | 0.2 | 3.32 | 23.8 | 14.8 | 1.61 |
| 2009 | 23.0 | 25.9 | 0.89 | 0.1 | 0.0 | 4.76 | 0.6 | 0.1 | 4.48 | 23.4 | 12.2 | 1.91 |
| 2010 | 30.3 | 41.4 | 0.73 | 2.3 | 0.7 | 3.19 | 0.9 | 0.1 | 10.59 | 13.0 | 9.6 | 1.36 |
| 2011 | 37.5 | 40.9 | 0.92 | 0.4 | 0.7 | 0.57 | 1.5 | 0.1 | 13.51 | 14.3 | 9.2 | 1.56 |
| 2012 | 44.0 | 43.2 | 1.02 | 0.4 | 1.6 | 0.25 | 1.3 | 0.1 | 13.83 | 8.3 | 15.7 | 0.53 |
| 2013 | 47.2 | 39.1 | 1.21 | 2.0 | 1.1 | 1.79 | 0.3 | 0.1 | 3.45 | 12.9 | 13.0 | 1.00 |
| 2014 | 43.9 | 32.3 | 1.36 | 1.2 | 0.4 | 3.23 | 0.3 | 0.1 | 2.78 | 18.0 | 11.9 | 1.51 |
| 2015 | 38.6 | 23.8 | 1.62 | 1.2 | 0.9 | 1.39 | 0.6 | 0.1 | 5.94 | 11.8 | 14.6 | 0.81 |
| 2016 | 27.9 | 21.3 | 1.31 | 0.7 | 0.7 | 1.05 | 0.4 | 0.1 | 4.55 | 15.1 | 21.0 | 0.72 |
| 2017 | 21.2 | 33.0 | 0.64 | 0.8 | 0.5 | 1.70 | 0.4 | 0.1 | 4.04 | 15.8 | 13.8 | 1.14 |
| 2018 | 24.6 | 25.8 | 0.95 | 0.7 | 0.0 | 63.64 | 0.3 | 0.1 | 3.13 | 13.3 | 12.1 | 1.10 |
| 2019 | 21.3 | 18.6 | 1.14 | 0.3 | 0.4 | 0.71 | 0.3 | 0.1 | 3.12 | 13.6 | 13.0 | 1.05 |
| 2020 | 18.2 | 22.3 | 0.82 | 0.3 | 0.2 | 1.15 | 0.5 | 0.1 | 5.65 | 12.9 | 12.5 | 1.03 |
| 2021 | 18.9 | 37.8 | 0.50 | 0.6 | 0.3 | 2.34 | 0.5 | 0.1 | 3.60 | 10.5 | 9.0 | 1.16 |
| 2022 | 28.1 | 51.8 | 0.54 | 0.4 | 0.1 | 4.45 | 0.5 | 0.1 | 5.71 | 12.5 | 19.2 | 0.65 |
| 2023 | 41.2 | 67.2 | 0.61 | 0.2 | 0.5 | 0.34 | 0.5 | 0.1 | 4.87 | 12.2 | 12.8 | 0.96 |
| 2024[c/] | 40.9 | 48.7 | 0.84 | 0.2 | 0.8 | 0.27 | 0.6 | 0.1 | 6.87 | 10.4 | 11.0 | 0.95 |
| 2025 | 53.7 | - | - | 1.0 | - | - | 0.5 | - | - | 9.7 | - | - |
| 2026 | 55.0 | - | - | 1.5 | - | - | 0.6 | - | - | 11.9 | - | - |

TABLE II-9. Preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.[a/] (Page 2 of 3)

| Year or Average | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Stillaguamish [d/] Hatchery and Natural** | | | **Snohomish [d/] Hatchery** | | | **Snohomish [d/] Natural** | | | **Tulalip [d/] Hatchery** | | |
| 1993-95 | 1.8 | 1.3 | 1.31 | 2.0 | 3.7 | 0.44 | 4.6 | 3.9 | 1.16 | 2.6 | 5.7 | 0.56 |
| 1996-00 | 1.6 | 2.0 | 0.82 | 7.0 | 8.0 | 0.94 | 5.3 | 3.5 | 1.65 | 3.7 | 10.8 | 0.37 |
| 2001 | 1.7 | 2.0 | 0.87 | 4.1 | 2.9 | 1.43 | 5.8 | 6.7 | 0.86 | 5.5 | 6.3 | 0.87 |
| 2002 | 2.0 | 2.2 | 0.91 | 6.8 | 2.7 | 2.55 | 6.7 | 7.6 | 0.88 | 5.8 | 6.1 | 0.96 |
| 2003 | 2.0 | 1.5 | 1.32 | 9.4 | 6.1 | 1.55 | 5.5 | 5.8 | 0.94 | 6.0 | 10.3 | 0.58 |
| 2004 | 3.3 | 2.1 | 1.55 | 10.1 | 6.4 | 1.58 | 15.7 | 11.0 | 1.42 | 6.8 | 6.4 | 1.06 |
| 2005 | 2.0 | 1.7 | 1.21 | 9.9 | 4.0 | 2.47 | 14.2 | 5.0 | 2.83 | 6.4 | 7.1 | 0.90 |
| 2006 | 1.6 | 1.8 | 0.87 | 9.6 | 6.0 | 1.61 | 8.7 | 7.3 | 1.20 | 9.3 | 5.7 | 1.64 |
| 2007 | 1.9 | 1.1 | 1.74 | 8.7 | 8.4 | 1.03 | 12.3 | 3.0 | 4.13 | 8.4 | 5.8 | 1.44 |
| 2008 | 1.1 | 2.0 | 0.54 | 8.8 | 7.5 | 1.18 | 6.5 | 7.2 | 0.91 | 2.7 | 3.5 | 0.76 |
| 2009 | 1.7 | 1.2 | 1.38 | 4.9 | 2.6 | 1.88 | 8.4 | 1.9 | 4.43 | 4.0 | 1.8 | 2.23 |
| 2010 | 1.4 | 1.5 | 0.92 | 5.6 | 3.5 | 1.62 | 9.9 | 3.6 | 2.76 | 3.4 | 3.8 | 0.91 |
| 2011 | 1.8 | 1.6 | 1.14 | 5.2 | 3.5 | 1.51 | 7.4 | 1.5 | 4.97 | 3.5 | 5.2 | 0.68 |
| 2012 | 0.9 | 1.9 | 0.47 | 3.9 | 8.4 | 0.46 | 2.8 | 3.4 | 0.82 | 5.9 | 0.5 | 11.26 |
| 2013 | 1.3 | 1.6 | 0.79 | 5.9 | 6.0 | 0.98 | 3.6 | 2.9 | 1.25 | 10.9 | 2.0 | 5.38 |
| 2014 | 1.6 | 0.9 | 1.82 | 5.4 | 6.2 | 0.88 | 5.3 | 2.4 | 2.18 | 4.7 | 1.9 | 2.42 |
| 2015 | 0.5 | 0.9 | 0.58 | 3.3 | 4.8 | 0.69 | 4.2 | 2.3 | 1.80 | 1.3 | 2.7 | 0.48 |
| 2016 | 0.5 | 1.2 | 0.41 | 5.0 | 10.3 | 0.49 | 3.3 | 3.6 | 0.92 | 1.4 | 6.8 | 0.21 |
| 2017 | 1.5 | 1.3 | 1.19 | 4.8 | 9.3 | 0.51 | 3.4 | 4.5 | 0.75 | 5.3 | 12.0 | 0.44 |
| 2018 | 1.6 | 1.2 | 1.35 | 6.5 | 6.1 | 1.06 | 3.5 | 3.4 | 1.03 | 7.5 | 10.2 | 0.73 |
| 2019 | 0.9 | 1.1 | 0.78 | 7.0 | 6.4 | 1.11 | 3.2 | 1.1 | 2.93 | 12.5 | 9.3 | 1.34 |
| 2020 | 0.9 | 1.6 | 0.56 | 6.8 | 5.7 | 1.18 | 3.0 | 3.0 | 0.99 | 6.0 | 3.8 | 1.57 |
| 2021 | 0.9 | 0.8 | 1.08 | 6.1 | 7.3 | 0.83 | 2.9 | 2.3 | 1.29 | 5.8 | 3.0 | 1.93 |
| 2022 | 0.9 | 1.9 | 0.48 | 6.0 | 8.7 | 0.69 | 2.4 | 3.9 | 0.62 | 7.7 | 3.9 | 1.95 |
| 2023 | 1.2 | 1.0 | 1.21 | 7.5 | 6.5 | 1.15 | 3.4 | 1.6 | 2.07 | 5.5 | 7.6 | 0.72 |
| 2024[c/] | 0.9 | 2.0 | 0.45 | 8.4 | 9.4 | 0.90 | 2.7 | 4.6 | 0.58 | 5.9 | 8.5 | 0.70 |
| 2025 | 1.1 | - | - | 11.4 | - | - | 2.9 | - | - | 4.9 | - | - |
| 2026 | 1.3 | - | - | 9.7 | - | - | 3.5 | - | - | 6.3 | - | - |

TABLE II-9. Preseason forecasts and postseason estimates of Puget Sound run size for summer/fall Chinook in thousands of fish.[a/] (Page 3 of 3)

| Year or Average | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **South Puget Sound Hatchery** | | | **South Puget Sound Natural** | | | **Strait of Juan de Fuca Hatchery and Natural** | | | **Hood Canal Hatchery and Natural** | | |
| 1993-95 | 54.7 | 71.4 | 0.82 | 22.1 | 13.6 | 1.76 | 4.2 | 2.3 | 1.92 | 11.6 | 6.2 | 2.13 |
| 1996-00 | 64.3 | 74.3 | 0.91 | 19.2 | 15.2 | 1.27 | 3.0 | 3.5 | 0.89 | 7.3 | 16.6 | 0.54 |
| 2001 | 73.7 | 108.0 | 0.68 | 16.2 | 20.3 | 0.80 | 3.5 | 3.6 | 0.96 | 19.2 | 30.4 | 0.63 |
| 2002 | 90.8 | 106.9 | 0.85 | 16.9 | 20.4 | 0.83 | 3.6 | 3.7 | 0.97 | 25.3 | 34.4 | 0.73 |
| 2003 | 86.6 | 92.3 | 0.94 | 19.6 | 6.5 | 3.00 | 3.4 | 4.0 | 0.84 | 24.0 | 38.8 | 0.62 |
| 2004 | 86.5 | 97.0 | 0.89 | 17.5 | 10.9 | 1.60 | 3.6 | 5.5 | 0.65 | 29.6 | 36.9 | 0.80 |
| 2005 | 83.1 | 88.8 | 0.94 | 17.7 | 6.3 | 2.82 | 4.2 | 3.7 | 1.13 | 30.6 | 59.3 | 0.52 |
| 2006 | 85.8 | 133.4 | 0.64 | 21.3 | 9.4 | 2.26 | 4.2 | 4.4 | 0.96 | 30.2 | 47.0 | 0.64 |
| 2007 | 83.0 | 167.4 | 0.50 | 17.0 | 11.6 | 1.46 | 4.4 | 2.1 | 2.07 | 47.5 | 39.3 | 1.21 |
| 2008 | 101.6 | 111.5 | 0.91 | 21.1 | 15.3 | 1.38 | 3.2 | 1.9 | 1.71 | 36.8 | 40.9 | 0.90 |
| 2009 | 93.0 | 89.1 | 1.04 | 17.2 | 3.0 | 5.68 | 2.4 | 4.4 | 0.55 | 42.6 | 44.0 | 0.97 |
| 2010 | 97.4 | 95.1 | 1.02 | 12.7 | 4.1 | 3.10 | 1.9 | 2.9 | 0.66 | 45.0 | 43.7 | 1.03 |
| 2011 | 118.6 | 86.6 | 1.37 | 8.9 | 3.5 | 2.51 | 2.5 | 4.1 | 0.61 | 40.6 | 68.5 | 0.59 |
| 2012 | 95.8 | 84.6 | 1.13 | 8.9 | 5.7 | 1.55 | 2.9 | 4.2 | 0.68 | 46.8 | 97.5 | 0.48 |
| 2013 | 102.0 | 93.6 | 1.09 | 5.0 | 4.8 | 1.05 | 4.3 | 6.4 | 0.68 | 66.2 | 76.9 | 0.86 |
| 2014 | 96.7 | 44.0 | 2.20 | 4.8 | 3.3 | 1.46 | 5.3 | 6.9 | 0.77 | 84.1 | 27.1 | 3.11 |
| 2015 | 62.4 | 52.8 | 1.18 | 3.8 | 5.5 | 0.69 | 8.4 | 7.3 | 1.16 | 62.1 | 35.9 | 1.73 |
| 2016 | 43.1 | 88.6 | 0.49 | 4.5 | 6.7 | 0.68 | 6.6 | 4.5 | 1.48 | 45.0 | 66.2 | 0.68 |
| 2017 | 80.4 | 157.0 | 0.51 | 4.7 | 8.7 | 0.54 | 4.6 | 5.0 | 0.92 | 50.8 | 100.9 | 0.50 |
| 2018 | 123.6 | 117.0 | 1.06 | 4.8 | 7.4 | 0.66 | 7.4 | 10.2 | 0.73 | 61.4 | 72.1 | 0.85 |
| 2019 | 99.9 | 100.1 | 1.00 | 8.4 | 5.7 | 1.49 | 8.3 | 10.4 | 0.80 | 67.2 | 62.4 | 1.08 |
| 2020 | 100.7 | 63.4 | 1.59 | 5.8 | 5.8 | 0.99 | 5.0 | 6.2 | 0.80 | 72.2 | 23.6 | 3.06 |
| 2021 | 78.8 | 100.4 | 0.79 | 7.0 | 7.2 | 0.97 | 5.5 | 5.5 | 0.99 | 69.8 | 54.5 | 1.28 |
| 2022 | 90.3 | 93.0 | 0.97 | 6.9 | 8.5 | 0.82 | 5.0 | 6.7 | 0.75 | 57.3 | 76.0 | 0.75 |
| 2023 | 90.4 | 81.5 | 1.11 | 7.0 | 5.1 | 1.37 | 3.7 | 9.4 | 0.40 | 56.8 | 62.1 | 0.91 |
| 2024[c/] | 90.5 | 80.1 | 1.13 | 7.3 | 7.3 | 0.99 | 4.3 | 9.1 | 0.47 | 60.6 | 44.9 | 1.35 |
| 2025 | 94.4 | - | - | 8.5 | - | - | 5.2 | - | - | 59.7 | - | - |
| 2026 | 102.0 | - | - | 8.8 | - | - | 5.3 | - | - | 71.1 | - | - |

a/ Puget Sound run size is defined as the run available to Puget Sound net fisheries. Does not include fish caught by troll and recreational fisheries in Puget Sound marine waters.

b/ Postseason returns do not include hatchery strays to the spawning grounds.

c/ Postseason returns are preliminary.

d/ Preseason forecasts include a variety of runsize types including escapement without fishing and terminal run. Postseason returns are in terms of terminal run of Chinook returning to area 8A. This includes all adult Chinook harvested in the net fisheries in Areas 8A, 8D, and the Stillaguamish and Snohomish Rivers, harvest in sport fisheries in Area 8D, and the Stillaguamish and Snohomish River escapements.

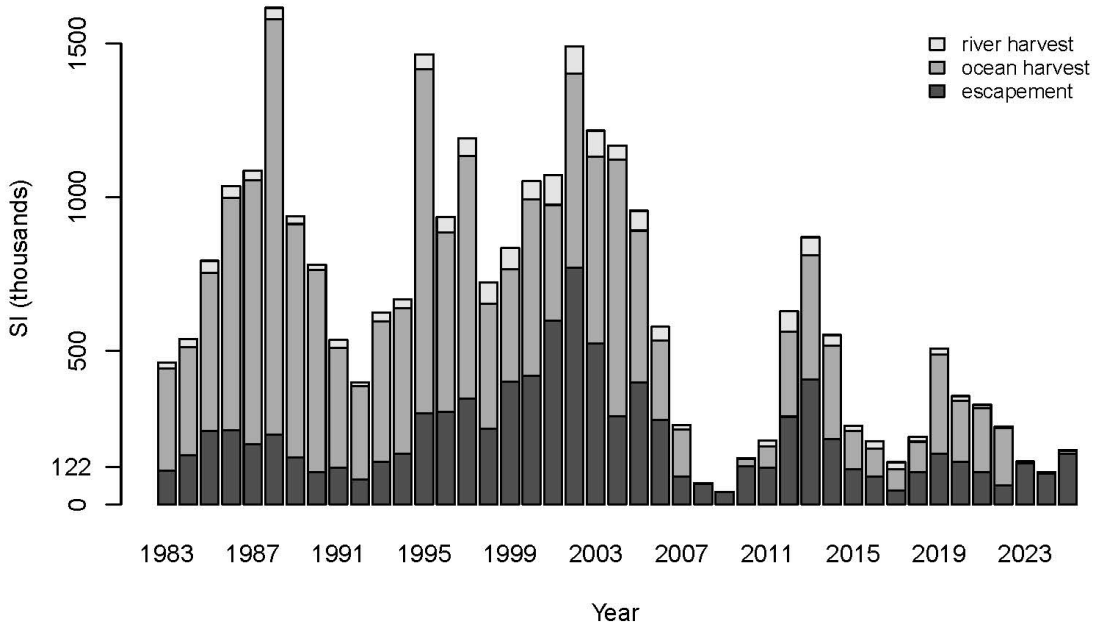


FIGURE II-1. The Sacramento Index (SI) and relative levels of its components. The Sacramento River fall Chinook SMSY of 122,000 adult spawners is noted on the vertical axis.

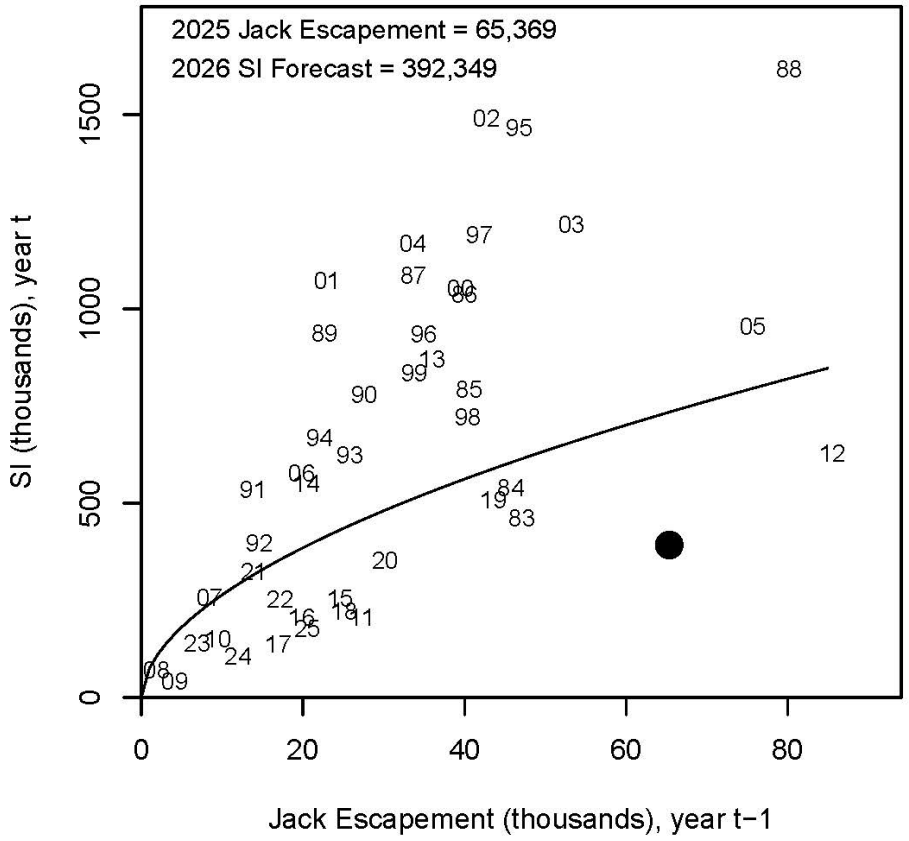


FIGURE II-2. Sacramento Index (SI) forecast based on log-log regression of the SI on jack escapement from the previous year, accounting for autocorrelated errors. The solid line represents the fitted model and the black dot denotes the SI forecast. Years shown are are SI years.

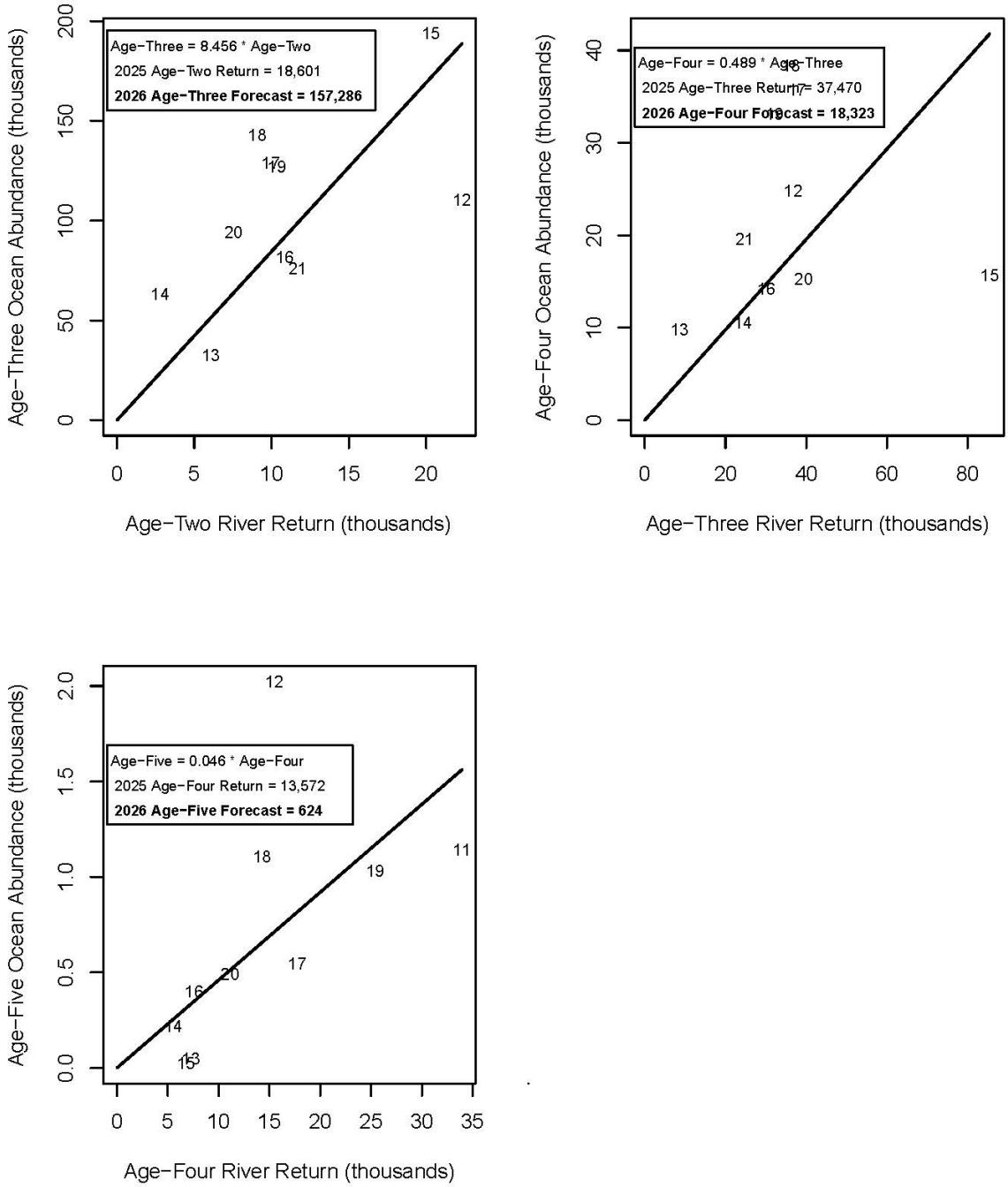


FIGURE II-3. Regression estimators for Klamath River fall Chinook ocean abundance (September 1) based on that year's river return of same cohort. Numbers in plots denote brood years.

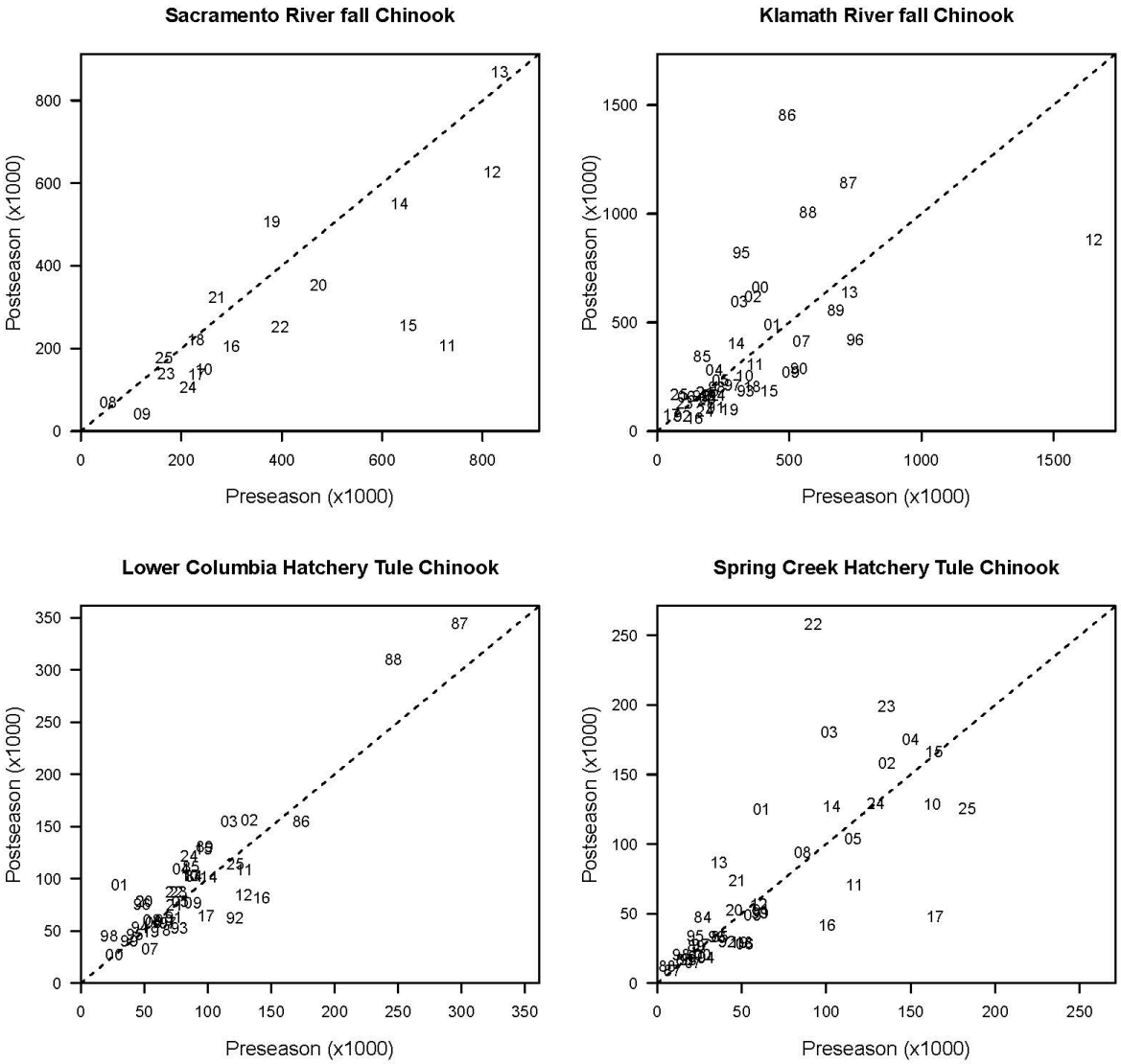


FIGURE II-4. Selected preseason vs. postseason forecasts for Chinook stocks with substantial contribution to Council area fisheries.

# CHAPTER III - AFFECTED ENVIRONMENT - COHO SALMON ASSESSMENT

## *COLUMBIA RIVER AND OREGON/CALIFORNIA COAST COHO*

### *3.1 OREGON PRODUCTION INDEX AREA*

The majority of coho harvested in the Oregon Production Index (OPI) area originate from stocks produced in rivers located within the OPI area (Leadbetter Point, Washington to the U.S./Mexico border). These stocks include hatchery and natural production from the Columbia River, Oregon Coast, and northern California, and are divided into the following components: (1) Columbia River, coastal Oregon, and northern California public hatchery (OPIH), (2) Oregon coastal natural (OCN), including river and lake components, and (3) Lower Columbia natural (LCN). Direct comparisons of 2025 abundance forecasts with recent year preseason abundance forecasts and postseason estimates are reported in Table III-1.

Beginning in 2008, a method was developed to estimate postseason coho abundances for both the natural and hatchery components of the Columbia River and the Oregon coast. The run size estimates are based on Backwards FRAM (BKFRAM, also referred to as postseason FRAM) run reconstructions. BKFRAM is used to estimate the pre-fishing abundances and post-season exploitation rates of OPI stocks. FRAM is populated with post-season estimates of escapements and catches/non-retention mortalities for OPI fisheries. When run in BKFRAM mode, stock specific mortalities are added to escapements to reconstruct pre-fishing abundances and to estimate exploitation rates.

#### 3.1.1 Hatchery Coho

OPI area public hatchery coho smolt production occurs primarily in Columbia River facilities. Several facilities located in Oregon coastal rivers and in the Klamath River Basin, California, collectively produce fewer coho. Salmon Trout Enhancement Hatchery Coho Smolt Program (STEP) releases were discontinued after the 2004 brood. There have been no Oregon coastal private hatchery coho (PRIH) smolt releases since 1990. OPI area smolt releases since 1960 are reported by geographic area in Appendix C, Table C-1.

The OPIH abundance forecast includes all hatchery production in the OPI area, and all naturally produced coho from the Columbia River basin. After the total OPIH forecast is produced, stock components including Columbia River early and late hatchery stocks, LCN, and coastal Oregon and northern California hatchery coho, are partitioned from the total forecast value.

##### *Predictor Description*

Beginning in 2024, OPIH abundance was forecasted using an autoregressive integrated moving average (ARIMA) model with an ensemble approach (see the November 2023 PFMC Briefing Book, Agenda Item D.3, Attachment 1 and Supplemental Attachment 2 for additional information). Additionally, beginning in 2025, an adjustment was made in the ARIMA modeling to include an exponential decay weight on the initial model selection process (see the November 2025 PFMC Agenda Item G.3, Attachment 1 for additional information). From 1996 to 2023, the OPIH forecast was a regression model that included adult recruits, jack returns, and smolt production. Further documentation for this past forecast approach can be found in the 2023 Preseason Report I (PFMC 2023).

The ARIMA model forecasts ocean adult abundance for the OPIH component with 11 covariates: jack returns and the delayed smolt adjustment metric used in the past forecast approach, as well as nine environmental variables (Table C-2). The jack return metric includes hatchery jack returns to all OPI coastal areas and to the Columbia River. The jack return values are also log-transformed because the ARIMA models are fit using a log-link (as opposed to the past methodology that used an identity link). The adjusted smolt metric was also modified by log-transforming Columbia River jack abundance in its calculation:

$$lag1_\log_SmAdj = \log(lag1.JackCR) * (lag1.SmD/lag1.SmCR)$$

Where, JackCR is the total jack return to the Columbia River hatcheries and dams, SmD is the delayed smolt release from Columbia River hatcheries, and SmCR is the total smolts releases from Columbia River hatcheries.

The OPIH ARIMA model approach is a multistep process that results in an ensemble forecast. First, ARIMA models were fit to 1,485 unique combinations of the 11 covariates to subsets of the data beginning with the first year of post-season run size estimates (1970) and running through years 2010-2025. Each ARIMA model forecasts the abundance for the year following the last year in the data used to fit the model, such that 1,485 one-year-ahead forecasts with distinct combinations of covariates were generated for returns years 2011-2026. The models' performance were assessed based on their mean average percent error (MAPE) over the 15 most recent years (2011-2025), with a decay weight in place during the assessment process. The ensemble forecast was generated by taking weighted means of the 10 models with the lowest MAPE. The weights assigned to each model were proportional to the inverse of their MAPE (as calculated with decaying weights by year). The ten models used to generate the 2026 OPIH forecast, their weight in the ensemble, and their ARIMA orders can be found in Table C-5.

The OPIH forecast was divided into Columbia River early and late and coastal components. In 2026, the early, late, and coastal components were calculated by applying the ten year recent average proportion of each component to the OPIH forecast. The coastal hatchery stock is further partitioned into northern and southern coastal stock components using the proportion of smolt releases north and south of Cape Blanco in 2025. The proportion of the regression results for each component was applied to the ARIMA-based forecast to derive the component forecast seen in Table III-1. LCN abundance is included as a subset of the early and late hatchery abundance. After the LCN forecast is developed (see 3.1.4), the LCN subset for the early and late components is derived. The LCN component within the early OPIH forecast is 35 percent of the Washington LCN forecast, 75 percent of the Clackamas forecast and 100 percent of all other Oregon tributary forecasts. The LCN component of the OPIH late forecast is 65 percent of the Washington LCN forecast and 25 percent of the Clackamas forecast.

### *Predictor Performance*

Recent year OPIH stock preseason abundance forecasts partitioned by production area, stock, and as a total, are compared with postseason estimates in Table III-1 and Figure III-1a. The 2025 preseason abundance prediction of 493,600 OPIH coho was 80 percent of the preliminary postseason estimate of 619,300 coho.

### *Stock Forecast and Status*

The OPIH abundance forecast for 2026 is 519,300 coho, 105 percent of the 2025 preseason abundance prediction and 84 percent of the preliminary 2025 postseason estimate (Table III-1).

## 3.1.2 Oregon Coastal Natural Coho

The OCN stock is composed of natural production north of Cape Blanco, Oregon from river (OCNR) and lake (OCNL) systems, which are forecasted independently.

Under the FMP, ESA consultation standards are used in place of ACLs for ESA-listed stocks like OCN (and Southern Oregon/Northern California Coast (SONCC) and Central California Coast (CCC)) coho.

### *Predictor Description*

#### 3.1.2.1.1 Oregon Coastal Natural Rivers

Prior to 2010, a variety of methods were used to forecast OCNR coho abundance. Beginning in 2011, generalized additive models (GAMs) were used to relate OCNR recruitment to ocean environment indices. Nine variables were evaluated, ranging from indices of large-scale ocean patterns (e.g., Pacific Decadal Oscillation (PDO)) to local ecosystem variables (e.g., sea surface temperature at Charleston, OR). It was found that high explanatory power and promising forecast skill could be achieved when the mean May-July PDO averaged over the four years prior to the return year was used in combination with two other variables in a GAM. The multi-year average of the PDO, in essence, explains the lower frequency (multi-year) variability in recruitment, and can be viewed as a replacement of the Regime Index used previously. A final set of six models using six different environmental indices plus parent spawner abundance was chosen from the possible model combinations. When averaging the predictions from the set of models (the ensemble mean), a higher skill (in terms of variance explained or cross-validation) was achieved than by selecting any single model. Making multiple forecasts from a set of models also provides a range of possible outcomes that reflects, to some degree, the uncertainty in understanding how salmon productivity is driven by ocean conditions.

Specifically, the final estimate is the mean of six GAM estimates, each with three predictor variables. The individual GAMs can be expressed in the following general form:

$$\hat{Y} = f(X_1) + f(X_2) + f(X_3) + \varepsilon$$

Where $\hat{Y}$ is the prediction, $X_1$ through $X_3$ are the predictor variables, and $\varepsilon$ is the deviation of $\hat{Y}$ from the observation $Y$. For the prediction, $Y$ was the log-transformation of annual recruit abundance. The term $f$ represents a smooth function, which in this case is a cubic spline.

The ensemble mean predictor was the geometric mean of the six GAM predictors which is provided in Appendix C, Table C-6. For 2026, the OCNR forecast is 207,700.

The OCNR stock data set and a definition of the above terms are presented in Appendix C, Table C-4.

#### 3.1.2.1.2 Oregon Coastal Natural Lakes

Since 1988, except for 2008 [3], the abundance of OCNL index coho has been predicted using the most recent three-year average adult stock abundance. OCNL coho production occurs from three lake systems (Tenmile, Siltcoos, and Tahkenitch). For 2026, the OCNL forecast is 10,950, based on most recent three-year average adult stock abundance.

### *Predictor Performance*

Recent year OCN preseason abundance predictions are compared to postseason estimates in Table III-1. The 2025 preseason abundance prediction of 289,000 OCN coho was 194 percent of the preliminary postseason estimate of 149,300 coho.

### *Stock Forecasts and Status*

The 2026 preseason prediction for OCN (river and lake systems combined) is 218,600 coho, 76 percent of the 2025 preseason prediction and 146 percent of the 2025 postseason estimate (Table III-1).

In November 2013, the Council approved a methodology change for a new marine survival index for the OCN coho harvest matrix that uses biological and oceanographic indicators for preseason planning beginning in 2014 (see the November 2013 PFMC Briefing Book, Agenda Item C.2.a, Attachment 1 for

[3] For the 2008 preseason prediction, OPITT used the 2007 postseason abundance estimate of 10,000 coho instead of using the most recent three-year average.

additional information). In November 2025, the Council approved a change to the marine survival index forecast method to allow a state-space model to infer site specific marine survival values if a trap site is not operated that year (see the November 2025 PFMC Briefing Book, Agenda Item G.3, Attachment 2 for additional information). Based on this methodology, the forecast marine survival index of 6.08 percent and the parent escapement levels, allows for a total allowable exploitation rate for 2026 fisheries that is no greater than 30.0 percent (Table V-8: Appendix Table A-4).

### 3.1.3 Southern Oregon / Northern California Coast Coho

The SONCC coho ESU consists of all naturally produced populations of coho from coastal streams between Cape Blanco, OR and Punta Gorda, CA. Under the FMP, ESA consultation standards are used to manage ESA-listed stocks, including SONCC coho and CCC coho.

Under FMP Amendment 22, the harvest control rule was revised to include (1) a total fishery (marine and freshwater) exploitation rate limit of 15.0 percent for all populations within the SONCC ESU, except the Trinity River coho populations, and (2) a total fishery exploitation rate limit of 16.0 percent for the Trinity River coho populations.

### 3.1.4 Lower Columbia River Natural

LCN coho consist of naturally produced coho mostly from Columbia River tributaries below Bonneville Dam; however, coho produced in the upper Willamette are not part of the ESA-listed ESU and are not included in the LCN coho forecast. LCN coho were listed as endangered under the Oregon State ESA in 2002, and as threatened under the Federal ESA on June 28, 2005. Under the FMP, ESA consultation standards are used in place of ACLs for ESA-listed stocks like LCN coho.

#### *Predictor Description*

The LCN stock predictor methodology was developed in 2007.

The 2026 predictions for the Oregon LCN coho populations are derived from the recent 3-year average abundances based on spawning ground counts. The 2026 adult abundance forecast for Oregon LCN coho is 26,700.

The 2026 predictions for the Washington LCN coho populations are derived by combining estimates of the 2023 brood year natural smolt production based on watershed area and the marine survival rate of 9.1 percent. The 2026 adult abundance forecast for Washington LCN coho is 75,100.

#### *Predictor Performance*

The preseason abundance compared to the postseason estimate is presented in Table III-1. The 2025 preseason abundance prediction of 72,000 LCN coho was 117 percent of the preliminary postseason estimate of 61,600 coho.

#### *Stock Forecast and Status*

The 2026 prediction for LCN coho is 101,800 coho (Table III-1). This abundance estimate includes both Oregon and Washington LCN components.

NMFS ESA guidance for harvest of LCN coho in marine and mainstem Columbia River fisheries applies a matrix describing parent escapement levels for multiple populations and the observed Columbia River OPI smolt-to-jack survival rate; this matrix was analyzed in a 2015 biological opinion that concluded fisheries managed with it are not likely to jeopardize the ESU. Based on this matrix, the total allowable marine and

mainstem Columbia River exploitation rate for LCN coho in 2026 fisheries would be no more than 23.0 percent.

### 3.1.5 Oregon Production Index Area Summary of Forecasts

The 2026 combined OPI area stock abundance is predicted to be 737,900 coho, which is 94 percent of the 2025 preseason prediction of 782,600 coho, and 96 percent of the 2025 preliminary postseason estimate of 768,600 coho. The historical OPI abundances are reported in Table III-1 and III-2.

## *3.2 WASHINGTON COAST COHO*

Washington coastal coho stocks include all natural and hatchery stocks originating in Washington coastal streams north of the Columbia River to the western Strait of Juan de Fuca (west of the Sekiu River). The stocks in this group most pertinent to ocean salmon fishery management are Willapa Bay (hatchery), Grays Harbor, Quinault (hatchery), Queets, Hoh, and Quillayute coho. These stocks contribute primarily to ocean fisheries off Washington and B.C.

A variety of preseason abundance estimators currently are employed for Washington coast and Puget Sound coho stocks, primarily based on smolt production and survival (see below). These estimators are used to forecast preseason abundance of adult (OA3) recruits.

A comparison was made of preseason OA3 forecasts with postseason estimates derived from run reconstructions using FRAM ("Backwards" mode, BKFRAM) to expand observed escapements to ocean abundance from CWT recovery data (Table III-3). It should be noted that forecast methodology has changed over time, and the overall trends and biases may not reflect the current methods.

Except for Willapa Bay, Washington coast coho fall within an exception to the ACL requirements of the MSA because they are managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for these stocks.

### 3.2.1 Willapa Bay

#### *Predictor Description*

Willapa Bay natural coho ocean abundance predictions are generated with both the auto-regressive model (AR1) and the spatio-temporal integrated population model (STIPM) state-space models presented for SSC review in October 2021 and built from the work of DeFilippo et al 2021 (see November 2021 briefing book, Agenda Item F.1, Attachment 3 for more information). These approaches base estimates on the series of past total returns (AR1) or a simplified life cycle model (returning spawners give rise to smolts, which are subject to marine survival and harvest). Lower recent year forecast error for the simpler AR1 model, combined with lower MAPE, supports the use of the AR1 forecast in 2026.

The hatchery terminal run size is calculated using a marine survival rate of 3.12 percent (8-year average; 2015-2022 brood years) applied to the 2023 estimated brood year smolts (2,190,738) released in the spring of 2025 from all Willapa Bay hatchery facilities. The terminal runsize is then expanded to an OA3 runsize using a 0.32 exploitation rate expansion factor, which is a 10-year average (2013-2022) of Willapa Bay hatchery coho marine survival based on coded wire tag (CWT) recoveries.

#### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table III-3; Figure III-1a). In 2024, the preseason forecast was 128 percent of the postseason estimate. Postseason estimates are not yet available for 2025.

### *Stock Forecasts and Status*

The 2026 Willapa Bay natural coho OA3 abundance forecast is 26,499, compared to the 2025 preseason forecast of 28,037.

The 2026 Willapa Bay hatchery coho OA3 abundance forecast is 100,624, compared to the 2025 preseason forecast of 93,718.

### *OFL, ABC, and ACL*

The OFL, ABC, and ACL are defined in terms of spawner escapement ($S_{OFL}$, $S_{ABC}$, and $S_{ACL}$) and are calculated using potential spawner abundance forecasts and established exploitation rates. Potential Willapa Bay coho natural area spawner abundance was derived by adding the current forecast of natural origin coho OA3 abundance, 26,499, to the predicted abundance of OA3 hatchery origin coho spawning in natural areas. The forecast of OA3 naturally spawning, hatchery origin coho is 8,654 and was calculated by multiplying the OA3 hatchery coho abundance forecast, 100,624, by the most recent 3-year average stray rate (0.086). Annual stray rates were estimated by dividing the number of hatchery origin spawners in natural areas by the number of hatchery origin river mouth returns. Stray rates in 2022, 2023 and 2024 were 0.124, 0.083, and 0.052 respectively. Combining natural origin coho and naturally spawning hatchery origin coho results in potential natural area spawning abundances of 35,153.

For Willapa Bay natural coho, $F_{MSY} = 0.74$, the value estimated from a stock-specific spawner-recruit analysis. The OFL for Willapa Bay natural coho is $S_{OFL} = 35{,}153 \times (1-0.74) = 9{,}140$. Because Willapa Bay natural coho are a Tier-1 stock, $F_{ABC} = F_{MSY} \times 0.95 = 0.70$, and $F_{ACL} = F_{ABC}$. The ABC for Willapa Bay natural coho is $S_{ABC} = 35{,}153 \times (1-0.70) = 10{,}546$, with $S_{ACL} = S_{ABC}$. These preseason estimates will be recalculated with postseason abundance estimates (when available) to assess ACL and OFL compliance.

## 3.2.2 Grays Harbor

Preseason abundance forecasts are made for natural fish throughout the system and for hatchery fish returning to three freshwater rearing complexes and three saltwater net-pen sites. The forecasts include fish originating from numerous volunteer production projects.

### *Predictor Description*

The natural forecast is the sum of the Chehalis River natural, Humptulips River natural, and South Bay tributary natural forecasts. An OA3 coho marine survival prediction was developed by converting the Quinault Department of Fisheries prediction of Queets coho JA3 marine survival. The Chehalis wild Coho smolts outmigrants are estimated from 2025 Queets smolt outmigration, scaled by the relationship between Queets and Chehalis JA3 abundances in Backward FRAM runs from 1998-2024. The Humptulips and South Bay tributary forecasts are based on recruit densities scaled from Clearwater and Chehalis basins, respectively.

The hatchery forecast is the sum of the Chehalis River, Humptulips River, and Grays Harbor net pen and off-site hatchery program hatchery-origin forecasts. The Chehalis River hatchery and Grays Harbor net pen terminal forecasts are based on a 10-year relationship with copepod community index, and the Humptulips River hatchery terminal forecast is based on 10-year relationships with sea surface temperatures. Terminal forecasts are then expanded to JA3 recruits based on coded-wire tag recoveries from 2010-2021.

### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table III-3; Figure III-1a). In 2024, the preseason forecast was 113 percent of the preliminary postseason estimate. Postseason estimates are not yet available for 2025.

### *Stock Forecasts and Status*

The 2026 Grays Harbor natural OA3 abundance forecast is 71,936 compared to a 2025 preseason forecast of 62,184.

The 2026 Grays Harbor hatchery coho OA3 abundance forecast is 93,279, compared to the 2025 preseason forecast of 87,805.

The ocean abundance forecast for Grays Harbor natural coho results in classification of the stock abundance as "Abundant" under the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ($S_{OFL}$). Potential Grays Harbor coho natural area spawner abundance was derived by adding the current forecast of natural origin coho OA3 abundance, 71,936, to the predicted abundance of OA3 hatchery origin coho spawning in natural areas. The forecast of OA3 naturally spawning hatchery origin coho is 8,955 and was calculated by multiplying the OA3 hatchery coho abundance forecast, 93,279, by the most recent 5-year average stray rate (2020-2024 average = 0.096). Annual stray rates were estimated by dividing the number of hatchery origin spawners in natural areas by the total hatchery origin escapement. Combining natural origin coho and naturally spawning hatchery origin coho results in potential natural area spawning abundances of 80,891. For Grays Harbor natural coho MFMT = 0.65 and the OFL is $S_{OFL} = 80{,}891 \times (1\text{-}0.65) = 28{,}312$. The preseason $S_{OFL}$ will also be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## 3.2.3 Quinault River

### *Predictor Description*

The 2026 Quinault natural coho forecast is the recent 5-year average JA3 abundance calculated from PSC post season FRAM modeling converted to OA3.

The hatchery forecast is calculated by multiplying the smolt releases from the Quinault (Cook Creek) Hatchery (674,029 adipose clipped smolts) by a forecasted marine survival rate of 4.07 percent. The marine survival rate (OA3 recruits/release) forecast is a recent 5-year mean (2020-2024 smolt years).

### *Predictor Performance*

There was no information available to evaluate performance of predictors for these stocks.

### *Stock Forecasts and Status*

The 2026 Quinault natural coho forecast is 23,571 OA3 recruits, compared to the 2025 forecast of 21,110.

The 2026 Quinault hatchery coho forecast is 36,528 OA3 recruits, compared to the 2025 forecast of 37,304.

### 3.2.4 Queets River

#### *Predictor Description*

The natural forecast is developed by multiplying the 2025 smolt outmigration of 277,139 by the predicted marine survival rate of 4.64 percent, which results in an abundance prediction of 12,862 JA3. Generalized additive models (logit (recruits/smolts) ~ spline (explanatory variable(s)) is used to predict survival rates using broad-scale atmospheric variables and local environmental and biotic covariates. In summary, covariates included all metrics from the NOAA stoplight chart, two metrics for Queets streamflow and two metrics for NPGO. All covariates were aligned to correspond with the first year of coho ocean residence. Top models were selected using cross validation methods resulting in a final model selection that include NPGO, Oceanic Niño Index (ONI), and spring transition date.

The hatchery forecast is based on the 2025 coho smolt release from the Salmon River Hatchery of 637,924 (548,802 adipose clipped). The OA3 marine survival rate of 3.30 percent is estimated using the 3-year mean of marine survival over the years 2022-2024.

#### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table III-3; Figure III-1a). In 2024, the preseason forecast was 131 percent of the postseason estimate. Postseason estimates are not yet available for 2025.

#### *Stock Forecasts and Status*

The 2026 Queets natural coho forecast is 10,443 OA3 recruits, compared to the 2025 forecast of 9,030.

The 2026 Queets hatchery (Salmon River) coho forecast is 21,057 OA3 recruits, compared to the 2025 forecast of 9,736. Approximately 86 percent of the fish released from the Salmon River facility were marked with an adipose fin clip.

The ocean abundance for Queets natural coho results in classification of this stock's status as "Abundant" under the 2019 PST Southern Coho Management Plan (Table III-5).

#### *OFL*

The OFL is defined in terms of spawner escapement ($S_{OFL}$). For Queets River coho, MFMT = 0.65, and the OFL is $S_{OFL}$ = 10,443 × (1-0.65) = 3,655. The preseason $S_{OFL}$ value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

### 3.2.5 Hoh River

#### *Predictor Description*

The natural coho forecast is based on estimated average smolt production per square mile of watershed from the Clearwater tributary which lies between the Queets River mainstem and the Hoh River. The Quinault Fisheries Department has a long-standing trapping program on the Clearwater River to estimate smolt production; it is assumed the two rivers produce smolts at a comparable rate per square mile of watershed. In 2025, the Clearwater produced 65,728 smolts at the rate of 469 smolts/mi$^2$. Applying that rate to the Hoh watershed of 299 mi$^2$ yields 140,231 natural coho smolts emigrating from the Hoh River in 2025.

A marine survival estimate to JA3 of 5.70 percent was applied to the total natural smolt production estimate to predict the 2026 return of Hoh River wild coho. This rate is the mean of two marine survival estimates

of wild stocks that are to the north and south of the Hoh River: the Queets wild coho to the south with a marine survival estimate of 5.72 percent JA3 (Vosbigian, QDFi) and Washington Coast wild coho stocks with a marine survival estimate of 5.67 percent JA3 (WDFW 2026). The average marine survival rate of 5.7 percent JA3 (4.62 percent OA3) is within 2 percent of the OA3 survival of 4.6 percent predicted in 2026 for other Washington Coast coho stocks (WDFW 2026).

Hoh system hatcheries have no forecasted returns for 2026.

### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table III-3; Figure III-1a). In 2024, the preseason forecast was 65 percent of the postseason estimate. Postseason estimates are not yet available for 2025.

### *Stock Forecasts and Status*

The 2026 Hoh natural coho forecast is 6,479 OA3 recruits, compared to the 2025 forecast of 5,371.
The ocean abundance for Hoh natural coho results in classification of this stock's status as "Abundant" under the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ($S_{OFL}$). For Hoh River coho, MFMT = 0.65, and the OFL is $S_{OFL}$ = 6,479 × (1-0.65) = 2,268. The preseason $S_{OFL}$ value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## 3.2.6 Quillayute River

Quillayute River coho consists of a summer run that is managed primarily for hatchery production, and a fall run that is managed primarily for natural production. Quillayute River coho have both natural and hatchery components to both runs.

### *Predictor Description*

The natural coho forecast is based on coho smolt data measured in the Quillayute watershed in 2025 by West Fork Environmental and the Quileute Nation. A total of 312,751 coho smolts are estimated to have emigrated from the Quillayute River system in 2025.

Smolt abundance from the Dickey River are estimated to be 55,900 wild coho smolts (643 smolts/mi$^2$). Smolt abundance from the Bogachiel, Calawah, and Sol Duc rivers was estimated to be 243,307 wild coho smolts (467 smolts/mi$^2$).

Total smolts are separated into summer and fall natural coho smolts by the relative number of natural brood year 2023 spawners, 3.91 percent and 96.09 percent, respectively. Results from this separation yield estimates of 12,235 natural summer coho smolts and 300,516 natural fall coho smolts.

#### Summer Coho

The summer natural coho forecast is based on the estimated total summer coho smolt production (12,235) and a JA3 projected marine survival rate of 5.29 percent which is converted to OA3.

The summer hatchery production forecast is based on a marine survival estimate of 2.93 percent multiplied by a release of 105,065 smolts from the Sol Duc Hatchery. This yields 3,079 summer hatchery JA3 coho recruits which is converted to OA3.

### Fall Coho

The forecast for the natural component is based on the estimated total fall coho smolt production (300,516) multiplied by an expected JA3 marine survival rate of 5.29 percent, the same survival rate used to forecast summer natural returns, which is converted to OA3.

The fall hatchery production forecast is based on a JA3 marine survival estimate of 2.93 percent multiplied by a release of 546,757 smolts which is converted to OA3.

#### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table III-3; Figure III-1a). In 2024, the preseason forecast was 116 percent of the postseason estimate. Postseason estimates are not yet available for 2025.

#### *Stock Forecasts and Status*

The 2026 Quillayute summer natural and hatchery coho forecasts are 525 and 2,500 OA3 recruits, respectively; 99.6 percent of the hatchery smolts were marked with an adipose fin clip and coded wire tag. The 2026 forecast abundance of natural summer coho is higher than the 2025 forecast of 347.

The 2026 Quillayute fall natural and hatchery coho forecasts are 12,907 and 13,010 OA3 recruits, respectively. The 2026 forecast abundance of Quillayute fall natural coho is higher than the 2025 forecast of 10,882. Approximately 83.4 percent of the hatchery fish were marked with an adipose fin clip.

The ocean abundance forecast for Quillayute fall natural coho results in classification of the stock abundance as "Abundant" under the 2019 PST Southern Coho Management Plan (Table III-5).

### 3.2.7 North Washington Coast Independent Tributaries

#### *Predictor Description*

The 2026 forecast of natural coho production for these independent streams is based on applying the recent 5-year average production rate of 527 smolts per square mile of watershed drainage, 424 square miles of watershed, and resulting in 223,000 smolts. This is multiplied by an expected OA3 marine survival rate of 4.6 percent (WDFW 2026). The watershed drainage area for the Tsoo-Yess River, 41 square miles, within the total watershed drainage and associated return forecast is removed from the total forecast and natural coho production for the Tsoo-Yess River is forecasted using separate methodology directly predicting recruit abundance rather than marine survival. For recruits returning in 2026, the selected model incorporates sea surface temperature measured at the Neah Bay buoy during the May–September period, which has demonstrated a strong relationship with NOR recruitment.

The 2026 hatchery forecast is developed as the product of estimated smolts multiplied by a predicted marine survival rate. As a result of changing climate conditions and increasing difficulty with rearing coho in the hatchery over the summer, Makah National Fish Hatchery and the Makah Tribe implemented a coho fry release program that began in 2018 and continued through 2024. Total outmigration was estimated at 4,929 coho smolts originating from both hatchery fry releases and natural production. The selected hatchery-origin forecast model uses the natural log of the jack return rate as the predictor of marine survival and forecasts a JA3 marine survival rate of 4.83 percent for smolts entering the ocean in 2025.

#### *Predictor Performance*

There was no information available to evaluate performance of predictors for these stocks.

### *Stock Forecasts and Status*

The 2026 North Coast Independent Tributaries natural coho forecast for all systems excluding the Tsoo-Yess River is 9,451 OA3 recruits. The Tsoo-Yess River natural coho forecast is 534 OA3 recruits. Combined, this results in a total natural coho forecast of 9,985, compared to the 2025 forecast of 9,447.

The 2026 Tsoo-Yess River hatchery forecast is for 4,410 OA3 recruits, compared to the 2025 forecast of 3,319. All of the hatchery smolts released were marked with an adipose fin clip.

## *3.3 PUGET SOUND COHO STOCKS*

Puget Sound coho salmon stocks include natural and hatchery stocks originating from U.S. tributaries in Puget Sound and the Strait of Juan de Fuca. The primary stocks in this group that are most pertinent to ocean salmon fishery management are Strait of Juan de Fuca, Hood Canal, Skagit, Stillaguamish, Snohomish, and South Puget Sound (hatchery) coho. These stocks contribute primarily to ocean fisheries off Washington and B.C.

A variety of preseason abundance estimators are currently employed for Puget Sound coho stocks, primarily based on smolt production and survival. However, recent inter-annual variation in the ratios of jacks to adult returns for natural coho salmon in some watersheds has necessitated alternative predictors of adult coho marine survival; these forecasts use generalized additive models that incorporate environmental indicators (Table I-2) to predict adult OA3 recruit abundances. Forecasts for natural Puget Sound coho stocks were generally derived by measured or predicted smolt production from each major watershed or region, multiplied by stock-specific marine survival rate prediction. These marine survival rate predictions were based on a jack return model from the WDFW Big Beef Creek Research Station in Hood Canal, natural coho CWT tagging programs at Baker Lake (Skagit River basin) and South Fork Skykomish River, adult recruits/smolt data generated from the WDFW Deschutes River Research Station, or other information. Puget Sound hatchery forecasts were generally the product of 2024 brood year smolt releases from each facility and a predicted marine survival rate for each program. Hatchery marine survival rates were typically based on recent year average survival rates derived from CWT recovery information and/or run reconstructions.

The 2026 total Puget Sound region natural and hatchery coho ocean recruit forecast is 897,180, compared to a 2025 preseason forecast of 727,386. The 2026 natural forecast is 388,790, compared to the 2025 preseason forecast of 257,890. The 2026 hatchery forecast is 508,390, compared to the 2025 preseason forecast of 469,496 (Table I-2).

A comparison was made of preseason OA3 forecasts with postseason estimates derived from run reconstructions using BKFRAM (Table III-4). This method expands observed escapements and actual catch to produce a FRAM estimate of post-season ocean abundance. This post-season FRAM estimate is dependent upon Base Period (1986-1992 fishing years) CWT recovery data. It should be noted that forecast methodology has changed over time, and the overall trends and biases may not reflect the current methods.

Puget Sound coho fall within an exception to the ACL requirements of the MSA because they are managed under an international agreement (the PST); therefore, specification of ACLs is not necessary for these stocks.

### 3.3.1 Strait of Juan de Fuca

#### *Predictor Description*

The natural forecast includes both Eastern and Western Strait of Juan de Fuca drainages. JA3 ocean recruits were predicted as the product of the estimated 2025 coho smolt outmigration from all independent tributaries of the Strait of Juan de Fuca, 265,416, and a predicted marine survival rate (4.54 percent) then converted to OA3. The marine survival rate was predicted by an $r^2$-weighted average of two linear regression models using the southern copepod biomass anomaly and the North Pacific Gyre Oscillation (NPGO) from January to March of the smolt ocean-entry year. The linear relationships that these models solved for have $r^2$ values of 0.32 and 0.22, respectively.

The hatchery forecast includes predicted coho returns to the Dungeness and Elwha Rivers, and beginning in 2026, predicted returns of Hoko hatchery coho.

#### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates. In 2024, the preseason forecast was 137 percent of the postseason estimate (Table III-4). Postseason estimates are not yet available for 2025.

#### *Stock Forecasts and Status*

The 2026 Strait of Juan de Fuca natural OA3 abundance forecast is 9,775, compared to the 2025 preseason forecast of 14,038.

The 2026 Strait of Juan de Fuca hatchery OA3 abundance forecast is 14,201, compared to the 2025 preseason forecast of 18,330.

The ocean abundance forecast for Strait of Juan de Fuca natural coho results in classification of the stock abundance as "Low" under the 2019 PST Southern Coho Management Plan and “Critical” under the FMP. This results in an allowable total exploitation rate of no more than 20 percent under both the Council-adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5).

#### *OFL*

The OFL is defined in terms of spawner escapement ($S_{OFL}$). For Strait of Juan de Fuca coho MFMT = 0.60, and the OFL is $S_{OFL}$ = 9,775 × (1-0.60) = 3,910. The preseason $S_{OFL}$ value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

### 3.3.2 Nooksack-Samish

#### *Predictor Description*

The natural coho forecast is the product of projected natural smolt production from each stream basin in the region, multiplied by stock-specific marine survival rate expectations, ranging from 4.6 to 8.0 percent (WDFW 2026).

Hatchery stock terminal abundance is forecast based on projected smolt releases from hatcheries in the region and stock-specific marine survival rate expectations, ranging from 0.8 to 8.5 percent. Marine survival rates for Lummi Bay and Skookum hatchery coho were estimated using a recent 5-year average of return rates while marine survival rates for Kendall hatchery coho were estimated using a recent 4-year average

of return rates. OA3 forecast abundances are then calculated from terminal abundance forecasts based on average pre-terminal ERs in recent years.

### *Predictor Performance*

There was no information available to evaluate performance of predictors for Nooksack-Samish coho stocks.

### *Stock Forecasts and Status*

The 2026 Nooksack-Samish natural OA3 abundance forecast is 35,500, compared to the 2025 preseason forecast of 29,545.

The 2026 Nooksack-Samish hatchery OA3 abundance forecast is 87,153, compared to the 2025 preseason forecast of 58,935.

## 3.3.3 Skagit

### *Predictor Description*

The 2026 Skagit wild coho forecast is based on a prediction of total (Baker wild + Skagit wild) smolt to OA3 survival. Note that this forecast is not based on Baker wild indicator CWT survival. The total survival is calculated assuming that the ratio of total wild terminal run size to Baker wild indicator run size is equal to the ratio of total pre-terminal wild catch to Baker pre-terminal wild catch. Using that ratio, total wild OA3 run size is calculated utilizing pieces of the Skagit co-manager run reconstruction, RMIS, and terminal area run reconstruction program (RRTERM). Given the recent increase in uncertainty of models based on PDO and the poor performance of ONI-based models in recent years, an alternative survival forecast method is used in 2026. Outmigration years 2020-2024 (and 2025) saw consistently better than average ocean conditions and returns associated with those outmigration years saw consistently high survival, so average survival over those years is used as the 2026 forecast. The 2026 wild survival rate calculated using this technique was 12.45 percent which is applied to the number of 2025 outgoing non-Baker-origin Skagit smolts. WDFW's coho forecast for Baker wild indicator survival relying on GAM methodology, which predicts a marine survival of 8.0 percent, is applied to outgoing Baker-origin smolts (WDFW 2026). The 2026 total Skagit wild forecast is the sum of the component forecasts.

The 2026 Skagit hatchery coho forecast uses the same observed marine survival averaging approach over the recent good ocean condition regime as the 2026 Skagit wild coho forecast to predict the hatchery coho survival for the 2026 return. The hatchery marine survival forecast using this technique was 7.18 percent. This marine survival rate is applied to estimated hatchery releases for the watershed. The 2025 hatchery outmigration/release estimates were 73,345 Baker marked hatchery smolts, 44,226 Marblemount unmarked hatchery smolts, and 455,997 Marblemount marked hatchery smolts. Multiplying each of these by the 7.18 percent survival estimate gives 2026 forecasts of 5,266 OA3 Baker marked hatchery coho, 3,175 OA3 Marblemount unmarked hatchery coho, and 32,741 OA3 Marblemount marked hatchery coho. The total 2026 hatchery forecast is 41,182 OA3 coho. In addition to the Marblemount/Baker hatchery coho releases, 30,950 hatchery marked and tagged coho were released from the Oak Harbor net pen program. Applying the same 7.18 percent predicted hatchery survival rate to that release results in a 2026 forecast of 2,222 for Oak Harbor net pen coho.

### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table III-4; Figure III-1b). In 2024, the preseason forecast was 47 percent of the postseason estimate. Postseason estimates are not yet available for 2025.

### *Stock Forecasts and Status*

The 2026 Skagit natural OA3 abundance forecast is 159,708, compared to the 2025 preseason forecast of 66,267.

The 2026 Skagit hatchery OA3 abundance forecast is 43,404, compared to the 2025 preseason forecast of 37,213.

The ocean abundance forecast for Skagit natural coho results in classification of the stock abundance as "Abundant" under the 2019 PST Southern Coho Management Plan and “Normal” under the FMP. This results in an allowable total exploitation rate of no more than 60 percent under both the Council-adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ($S_{OFL}$). For Skagit River coho, MFMT = 0.60 and the OFL is $S_{OFL}$ = 159,708 × (1-0.60) = 63,883. The preseason $S_{OFL}$ value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## 3.3.4 Stillaguamish

### *Predictor Description*

The 2026 Stillaguamish natural coho forecast model selection process dredged numerous environmental co-variate combinations via simple GLMs and GAMs. This process assigned individual model rank via the average performance of four metrics; centered root mean squared error, mean percent error, mean absolute error, and deviance explained. Based on these model performance criteria and considerations of 2024 river conditions and brood-year run size were considerations, OA3 estimated abundances were forecast using a GLM that included as predictors oceanic remote sense chlorophyll and out-migrating age-1+ coho from the Stillaguamish River smolt trap.

Stillaguamish hatcheries have no forecasted returns for 2026.

### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table III-4; Figure III-1b). In 2024, the preseason forecast was 64 percent of the postseason estimate. Postseason estimates are not yet available for 2025.

### *Stock Forecasts and Status*

The 2026 Stillaguamish natural OA3 abundance forecast is 37,941, compared to the 2025 preseason forecast of 27,473.

There are no expected returns for 2026 Stillaguamish hatchery coho. The 2025 preseason OA3 abundance forecast was 1,247.

The ocean abundance forecast for Stillaguamish natural coho results in classification of the stock abundance as "Abundant" under the 2019 PST Southern Coho Management Plan and “Normal” under the FMP. This results in an allowable total exploitation rate of no more than 50 percent under both the Council-adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ($S_{OFL}$). For Stillaguamish coho, MFMT = 0.50 and the OFL is $S_{OFL}$= 37,941 × (1-0.50) = 18,971. The preseason $S_{OFL}$ value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## 3.3.5 Snohomish

### *Predictor Description*

The Snohomish natural coho forecast is based on production of an estimated 1,357,000 out-migrant smolts in 2025 from a mark-recapture estimate of smolt abundance from two smolt traps, one operated on the Skykomish River (river mile 26.5) and the second on the Snoqualmie River (river mile 12.2). Smolt trap estimates for the Skykomish and Snoqualmie rivers are summed and further expanded for rearing downstream of the trap locations in the Snohomish River. OA3 forecasted abundance is then calculated based on these expanded smolt estimates and estimated marine survival. Snohomish coho marine survival for the 2026 returns is estimated by modeling smolt to adult marine survival with GAMs, using a model comparison framework to evaluate the relevance of potential environmental predictors. Model performance was compared on a weighted score including metrics such as R squared, root mean squared error, centered root mean square error, statistical bias, and mean absolute error. Based on these model selection criterion, marine survival was predicted using a model that included a linear effect of the stop light ichthyoplankton community index and a non-linear effect of the chlorophyl levels in the top 10 meters at Admiralty Inlet. This model predicted a marine survival for 2026 returning coho of 5.7 percent.

The Snohomish hatchery coho forecast is based on 2025 hatchery releases of smolts from the WDFW Wallace River Hatchery, the Everett Net Pens, Eagle Creek, and Tulalip Bernie Kai Kai Gobin Hatchery and estimated marine survival rates for each release group. The 2026 marine survival rate for Tulalip releases, 5.0 percent, is predicted from a GAM model that includes light transmission at Admiral Inlet Station (ADM001) as an environmental variable. For Wallace, Eagle Creek, and Everett net pen releases, marine survival rates are based on the recent three-year average survival rates of Wallace hatchery coho, 4.9%.

### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table III-4). In 2024, the preseason forecast was 75 percent of the postseason estimate. Postseason estimates are not yet available for 2025.

### *Stock Forecasts and Status*

The 2026 Snohomish natural OA3 abundance forecast is 75,800, compared to the 2025 preseason forecast of 59,000.

The 2026 Snohomish hatchery OA3 abundance forecast is 47,151, compared to the 2025 preseason forecast of 76,187.

The ocean abundance forecast for Snohomish natural coho results in classification of the stock abundance as "Moderate" under the 2019 PST Southern Coho Management Plan and “Low” under the FMP. This results in an allowable total exploitation rate of no more than 40 percent under both the Council-adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5)

### *OFL*

The OFL is defined in terms of spawner escapement ($S_{OFL}$). For Snohomish coho, MFMT = 0.60 and the OFL is $S_{OFL}$= 75,800 × (1-0.60) = 30,320. The preseason $S_{OFL}$ value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## 3.3.6 Hood Canal

### *Predictor Description*

The natural forecast is based on a linear regression model that relates the return of tagged natural jack coho at Big Beef Creek to Hood Canal December age-2 recruits in the subsequent run year, using brood years 1983-1998 and 2002-2020. This forecast was then converted to OA3. The 1999-2001 broods were excluded because of the unusually high recruit-per-tagged jack ratio, which is not expected to occur this year. For 2026, as was done since 2016, the co-managers agree to apply a conservative bias correction for forecasting natural coho in Hood Canal.

The hatchery forecast utilizes an average marine survival from CWT-based cohort reconstruction of December age-2 recruits/smolt for the six most recent available broods from each facility, applied to the 2023 brood smolt releases for each facility and converted to OA3.

### *Predictor Performance*

Forecast performance can be assessed, in part, by examining the differences between preseason forecasts and postseason estimates (Table III-4; Figure III-1b). In 2024, the preseason forecast was 42 percent of the postseason estimate. Postseason estimates are not yet available for 2025.

### *Stock Forecasts and Status*

The 2026 Hood Canal natural OA3 abundance forecast is 20,991, compared to the 2025 preseason forecast of 19,957.

The 2026 Hood Canal hatchery OA3 abundance forecast is 69,482, compared to the 2025 preseason forecast of 63,825.

The ocean abundance forecast for Hood Canal natural coho results in classification of the stock abundance as "Moderate" under the 2019 PST Southern Coho Management Plan and “Low” under the FMP. This results in an allowable total exploitation rate of no more than 45 percent under both the Council-adopted exploitation rate matrix (Appendix A, Table A-5) and the 2019 PST Southern Coho Management Plan (Table III-5).

### *OFL*

The OFL is defined in terms of spawner escapement ($S_{OFL}$). For Hood Canal coho MFMT = 0.65, and the OFL is $S_{OFL}$ = 20,991× (1-0.65) = 7,347. The preseason $S_{OFL}$ value will be recalculated with postseason abundance estimates (when available) to assess OFL compliance.

## 3.3.7 South Sound

### *Predictor Description*

Natural forecasts for the runs of coho that comprise the South Puget Sound natural coho aggregate are based on several forecasting approaches.

The Lake Washington natural coho forecast is based on a basin-wide naturally emigrating coho smolt production estimate of 51,701 smolts, which is multiplied by an estimated marine survival rate of 7.66 percent to get the expected return of 3,958 OA3 recruits. The marine survival of 7.66 percent was calculated based on adult returns observed across the last five years (2021-2025).

The Green River natural coho forecast is based on a basin-wide naturally spawning coho smolt production estimate of 24,650 smolts, which is multiplied by an estimated OA3 marine survival rate of 11.65 percent. The marine survival of 11.65 percent was calculated based on adult results across the last five years (2021-2025).

The East Kitsap natural coho forecast is based on a basin-wide naturally spawning coho smolt production estimate of 74,608 smolts, which is multiplied by an estimated OA3 marine survival rate of 5.37 percent. The marine survival of 5.37 percent is equivalent to the recent five year adult return rate to the Green River spawning grounds and is used as a surrogate for natural coho survival to East Kitsap.

Nisqually River natural forecasts are based on a recent five year average of OA3 marine survival (1.3 percent).

Deschutes River natural and South Sound natural forecasts are based on based on a model of marine survival rate based on light transmission measured at the Admiralty Inlet sampling station and the ONI, which predicted an OA3 marine survival rate of 1.6 percent (WDFW 2026).

### *Stock Forecasts and Status*

The 2026 South Sound natural OA3 abundance forecast is 49,075, compared to the 2025 preseason forecast of 41,577.

The 2026 South Sound hatchery OA3 abundance forecast is 246,999, compared to the 2025 preseason forecast of 213,759.

## *3.4. STOCK STATUS DETERMINATION UPDATES*

No coho stocks were subject to overfishing in 2024 and none met the criteria for overfished status based on 2022 - 2024 spawning escapements. For coho stocks for which projections could be made under the No-Action Alternative, none meet the criteria for approaching an overfished condition under 2025 fishery management measures (Table V-4).

## *3.5. SELECTIVE FISHERY CONSIDERATIONS FOR COHO*

As the region has moved forward with mass marking of hatchery coho salmon stocks, selective fishing options have become an important consideration for fishery managers. Projected coho mark rates in Council area fisheries are generally expected to be higher than 2025 projections. Table III-6 summarizes projected 2026 mark rates for coho fisheries by month from Southern British Columbia, Canada to the Oregon Coast, based on preseason abundance forecasts.

TABLE III-1. Preliminary preseason and postseason coho stock abundance estimates for Oregon production index area stocks in thousands of fish. (Page 1 of 2)

| Year or Average | Preseason | Postseason[a/] | Pre/Post season[a/] | Preseason | Postseason[a/] | Pre/Post season[a/] | Preseason | Postseason[a/] | Pre/Post season[a/] | Preseason | Postseason[a/] | Pre/Post season[a/] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Columbia River Hatchery Early | | | Columbia River Hatchery Late | | | Lower Columbia River Natural (LCN) | | | Oregon Coast Natural (OCN) (Rivers and Lakes) | | |
| 1996-00 | 212.9 | 181.4 | 1.3 | 128.9 | 102.5 | 1.6 | | | | 62.7 | 52.8 | 1.5 |
| 2001 | 1036.5 | 873.0 | 1.2 | 491.8 | 488.3 | 1.0 | | | | 50.1 | 163.2 | 0.3 |
| 2002 | 161.6 | 324.7 | 0.5 | 143.5 | 271.8 | 0.5 | | | | 71.8 | 304.5 | 0.2 |
| 2003 | 440.0 | 645.7 | 0.7 | 377.9 | 248.0 | 1.5 | | | | 117.9 | 278.8 | 0.4 |
| 2004 | 313.6 | 389.0 | 0.8 | 274.7 | 203.0 | 1.4 | | | | 150.9 | 197.0 | 0.8 |
| 2005 | 284.6 | 282.7 | 1.0 | 78.0 | 111.6 | 0.7 | | | | 152.0 | 150.1 | 1.0 |
| 2006 | 245.8 | 251.4 | 1.0 | 113.8 | 156.3 | 0.7 | | | | 60.8 | 116.4 | 0.5 |
| 2007 | 424.9 | 291.0 | 1.5 | 139.5 | 171.0 | 0.8 | 21.5 | 20.5 | 1.0 | 255.4 | 60.0 | 4.3 |
| 2008 | 110.3 | 342.3 | 0.3 | 86.4 | 219.9 | 0.4 | 13.4 | 28.7 | 0.5 | 60.0 | 183.1 | 0.3 |
| 2009 | 672.7 | 637.6 | 1.1 | 369.7 | 403.9 | 0.9 | 32.7 | 37.6 | 0.9 | 211.6 | 281.5 | 0.8 |
| 2010 | 245.3 | 272.6 | 0.9 | 144.2 | 260.3 | 0.6 | 15.1 | 53.2 | 0.3 | 148.0 | 296.7 | 0.5 |
| 2011 | 216.0 | 294.4 | 0.7 | 146.5 | 147.1 | 1.0 | 22.7 | 29.5 | 0.8 | 249.4 | 378.9 | 0.7 |
| 2012 | 229.8 | 115.7 | 2.0 | 87.4 | 55.7 | 1.6 | 30.1 | 12.9 | 2.3 | 291.0 | 121.3 | 2.4 |
| 2013 | 331.6 | 193.3 | 1.7 | 169.5 | 128.6 | 1.3 | 46.5 | 36.8 | 1.3 | 191.0 | 146.2 | 1.3 |
| 2014 | 526.6 | 777.4 | 0.7 | 437.5 | 516.5 | 0.8 | 33.4 | 108.7 | 0.3 | 230.6 | 402.0 | 0.6 |
| 2015 | 515.2 | 165.5 | 3.1 | 261.9 | 94.0 | 2.8 | 35.9 | 20.9 | 1.7 | 206.6 | 70.4 | 2.9 |
| 2016 | 153.7 | 134.0 | 1.1 | 226.9 | 102.4 | 2.2 | 40.0 | 25.1 | 1.6 | 152.7 | 83.2 | 1.8 |
| 2017 | 231.7 | 177.9 | 1.3 | 154.6 | 108.4 | 1.4 | 30.1 | 31.2 | 1.0 | 101.9 | 68.9 | 1.5 |
| 2018 | 164.7 | 98.7 | 1.7 | 121.5 | 82.0 | 1.5 | 21.9 | 29.7 | 0.7 | 54.9 | 81.3 | 0.7 |
| 2019 | 545.0 | 213.7 | 2.6 | 360.6 | 124.0 | 2.9 | 36.9 | 34.1 | 1.1 | 76.1 | 107.6 | 0.7 |
| 2020 | 130.7 | 247.0 | 0.5 | 50.3 | 134.8 | 0.4 | 24.8 | 55.4 | 0.4 | 83.0 | 110.0 | 0.8 |
| 2021 | 1014.0 | 580.3 | 1.7 | 576.0 | 249.6 | 2.3 | 39.2 | 70.5 | 0.6 | 125.0 | 273.3 | 0.5 |
| 2022 | 592.5 | 431.1 | 1.4 | 404.7 | 253.8 | 1.6 | 65.7 | 74.7 | 0.9 | 222.4 | 200.1 | 1.1 |
| 2023 | 481.8 | 365.3 | 1.3 | 404.3 | 143.6 | 2.8 | 45.5 | 77.9 | 0.6 | 238.8 | 185.7 | 1.3 |
| 2024 | 227.5 | 496.8 | 0.5 | 173.6 | 240.2 | 0.7 | 87.8 | 74.7 | 1.2 | 233.2 | 200.4 | 1.2 |
| 2025 | 338.1 | 353.6 | 1.0 | 141.6 | 261.0 | 0.5 | 72.0 | 61.6 | 1.2 | 289.0 | 149.3 | 1.9 |
| 2026 | 322.7 | - | - | 188.5 | - | - | 101.8 | - | - | 218.6 | - | - |

TABLE III-1. Preliminary preseason and postseason coho stock abundance estimates for Oregon production index area stocks in thousands of fish. (Page 2 of 2)

| Year or Average | Preseason | Postseason[a/] | Pre/Post season[a/] | Preseason | Postseason[a/] | Pre/Post season[a/] | Preseason | Postseason[a/] | Pre/Post season[a/] | Preseason | Postseason[a/] | Pre/Post season[a/] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Salmon Trout Enhancement Program (STEP)[c/] | | | Oregon Coast North of Cape Blanco | | | California and Oregon Coast South of Cape Blanco | | | Oregon Production Index (OPI) Area Hatchery Total[b/] | | |
| 1996-00 | 0.6 | | | | | | | | | | | |
| 2001 | 1.0 | 1.4 | 0.7 | 127.3 | 46.9 | 2.7 | 52.0 | 46.0 | 1.1 | 1,707.6 | 1,454.2 | 1.2 |
| 2002 | 0.6 | 3.0 | 0.2 | 36.6 | 41.6 | 0.9 | 20.0 | 22.0 | 0.9 | 361.7 | 660.1 | 0.5 |
| 2003 | 3.6 | 3.6 | 1.0 | 29.3 | 34.5 | 0.8 | 15.9 | 24.3 | 0.7 | 863.1 | 952.5 | 0.9 |
| 2004 | 3.1 | 1.0 | 3.1 | 16.6 | 21.7 | 0.8 | 19.0 | 29.9 | 0.6 | 623.9 | 634.6 | 1.0 |
| 2005 | 1.0 | 0.4 | 2.5 | 11.5 | 10.7 | 1.1 | 15.8 | 38.1 | 0.4 | 389.9 | 443.1 | 0.9 |
| 2006 | 0.6 | 0.1 | 6.0 | 8.6 | 7.9 | 1.1 | 30.6 | 25.0 | 1.2 | 398.8 | 440.6 | 0.9 |
| 2007 | 0.2 | 0.0 | - | 7.0 | 1.3 | 5.4 | 22.2 | 13.2 | 1.7 | 593.6 | 476.5 | 1.2 |
| 2008 | | | | 1.7 | 6.9 | 0.2 | 17.7 | 2.2 | 8.2 | 216.1 | 571.3 | 0.4 |
| 2009 | | | | 7.3 | 6.5 | 1.1 | 23.4 | 3.1 | 7.6 | 1,073.1 | 1,051.0 | 1.0 |
| 2010 | | | | 4.4 | 8.6 | 0.5 | 14.1 | 5.0 | 2.8 | 408.0 | 546.5 | 0.7 |
| 2011 | | | | 3.6 | 3.6 | 1.0 | 9.0 | 9.0 | 1.0 | 375.1 | 454.2 | 0.8 |
| 2012 | | | | 6.4 | 3.1 | 2.1 | 18.1 | 8.6 | 2.1 | 341.7 | 183.1 | 1.9 |
| 2013 | | | | 5.6 | 5.7 | 1.0 | 18.7 | 7.6 | 2.5 | 525.4 | 335.1 | 1.6 |
| 2014 | | | | 4.8 | 19.3 | 0.2 | 14.2 | 3.4 | 4.2 | 983.1 | 1,316.5 | 0.7 |
| 2015 | | | | 6.9 | 5.6 | 1.2 | 24.4 | 3.8 | 6.5 | 808.4 | 268.9 | 3.0 |
| 2016 | | | | 5.5 | 9.0 | 0.6 | 10.4 | 2.3 | 4.5 | 396.5 | 247.7 | 1.6 |
| 2017 | | | | 3.5 | 1.9 | 1.9 | 4.5 | 3.6 | 1.2 | 394.3 | 291.8 | 1.4 |
| 2018 | | | | 3.3 | 1.1 | 3.0 | 4.6 | 1.0 | 4.7 | 294.1 | 182.8 | 1.6 |
| 2019 | | | | 12.0 | 2.2 | 5.5 | 15.9 | 0.8 | 18.8 | 933.5 | 340.7 | 2.7 |
| 2020 | | | | 2.4 | 4.7 | 0.5 | 2.3 | 1.3 | 1.7 | 185.7 | 387.7 | 0.5 |
| 2021 | | | | 6.4 | 5.8 | 1.1 | 11.5 | 5.6 | 2.0 | 1,607.9 | 841.3 | 1.9 |
| 2022 | | | | 1.9 | 5.5 | 0.3 | 4.4 | 5.2 | 0.8 | 1,003.5 | 696.0 | 1.4 |
| 2023 | | | | 3.0 | 1.4 | 2.2 | 7.8 | 4.0 | 2.0 | 896.9 | 514.2 | 1.7 |
| 2024 | | | | 0.6 | 2.2 | 0.3 | 1.4 | 3.1 | 0.4 | 403.1 | 742.3 | 0.5 |
| 2025 | | | | 5.2 | 1.8 | 2.9 | 8.7 | 2.9 | 3.0 | 493.6 | 619.3 | 0.8 |
| 2026 | | | | 2.5 | - | - | 5.5 | - | - | 519.3 | - | - |

a/ Postseason estimates are based on preliminary data and not all stocks have been updated.

b/ LCN abundance is included as a subset of early/late hatchery abundance beginning in 2007. STEP estimates not included.

c/ Program was discontinued in 2005.

TABLE III-2. Oregon production index (OPI) area coho harvest impacts, spawning, abundance, and exploitation rate estimates in thousands of fish.[a/]

| Year or Avg. | Ocean Fisheries[b/] | | Oregon and California Coastal Returns | | | Columbia River Returns | Abundance[e/] | Ocean Exploitation Rate Based on OPI Abundance[f/] |
|---|---|---|---|---|---|---|---|---|
| | Troll | Sport | Hatcheries and Freshwater Harvest[c/] | OCN Spawners[d/] | Private Hatcheries | | | |
| 1970-1975 | 1,629.6 | 558.4 | 45.8 | 55.2 | - | 460.4 | 2,749.3 | 0.80 |
| 1976-1980 | 1,253.6 | 555.0 | 31.2 | 31.1 | 26.1 | 263.3 | 2,154.2 | 0.84 |
| 1981-1985 | 451.2 | 274.0 | 37.2 | 56.0 | 176.8 | 305.3 | 1,328.6 | 0.55 |
| 1986-1990 | 574.6 | 339.3 | 55.1 | 45.5 | 154.3 | 705.0 | 1,602.2 | 0.57 |
| 1991-1995 | 107.4 | 182.7 | 46.6 | 53.2 | 35.1 | 315.1 | 668.4 | 0.43 |
| 1996 | 7.0 | 31.8 | 45.8 | 87.5 | - | 117.1 | 260.3 | 0.15 |
| 1997 | 5.5 | 22.4 | 27.9 | 31.6 | - | 156.4 | 230.5 | 0.12 |
| 1998 | 3.5 | 12.8 | 31.2 | 34.9 | - | 175.9 | 270.8 | 0.06 |
| 1999 | 3.6 | 36.5 | 23.4 | 48.6 | - | 289.1 | 432.0 | 0.09 |
| 2000 | 25.2 | 74.6 | 37.0 | 84.8 | - | 558.3 | 762.4 | 0.13 |
| 2001 | 38.1 | 216.8 | 75.7 | 174.7 | - | 1128.3 | 1,673.2 | 0.15 |
| 2002 | 15.0 | 118.7 | 53.9 | 266.9 | - | 535.8 | 972.2 | 0.14 |
| 2003 | 28.8 | 252.4 | 44.9 | 236.2 | - | 713.2 | 1,266.9 | 0.22 |
| 2004 | 26.2 | 159.3 | 38.1 | 198.5 | - | 463.5 | 904.5 | 0.21 |
| 2005 | 10.5 | 58.2 | 42.7 | 165.1 | - | 354.7 | 629.9 | 0.11 |
| 2006 | 4.5 | 47.5 | 29.5 | 133.1 | - | 409.7 | 674.1 | 0.08 |
| 2007 | 26.2 | 128.5 | 10.9 | 71.6 | - | 349.0 | 631.3 | 0.25 |
| 2008 | 0.6 | 26.4 | 16.0 | 180.2 | - | 520.8 | 769.8 | 0.04 |
| 2009 | 27.7 | 201.2 | 16.5 | 265.5 | - | 760.2 | 1,341.3 | 0.17 |
| 2010 | 5.8 | 48.8 | 18.5 | 287.7 | - | 474.0 | 848.4 | 0.06 |
| 2011 | 4.2 | 54.7 | 20.0 | 361.3 | - | 382.4 | 836.4 | 0.07 |
| 2012 | 4.7 | 45.5 | 18.5 | 104.9 | - | 159.1 | 311.3 | 0.16 |
| 2013 | 8.4 | 48.3 | 26.5 | 136.8 | - | 260.4 | 494.1 | 0.11 |
| 2014 | 35.6 | 197.4 | 42.0 | 362.4 | - | 1045.3 | 1,724.8 | 0.14 |
| 2015 | 11.7 | 84.4 | 11.8 | 61.6 | - | 173.7 | 350.5 | 0.27 |
| 2016 | 2.8 | 31.7 | 11.4 | 83.5 | - | 210.8 | 340.3 | 0.10 |
| 2017 | 2.1 | 50.0 | 3.9 | 66.2 | - | 245.5 | 362.4 | 0.14 |
| 2018 | 1.5 | 53.8 | 3.1 | 83.8 | - | 132.6 | 265.8 | 0.21 |
| 2019 | 5.0 | 135.4 | 4.2 | 97.8 | - | 223.0 | 454.3 | 0.31 |
| 2020 | 2.3 | 40.2 | 7.4 | 111.8 | - | 344.7 | 499.7 | 0.08 |
| 2021 | 5.0 | 158.6 | 20.4 | 251.1 | - | 668.4 | 1,126.9 | 0.15 |
| 2022 | 8.5 | 127.4 | 16.9 | 177.9 | - | 539.7 | 905.2 | 0.15 |
| 2023 | 5.3 | 97.3 | 15.5 | 156.6 | - | 419.5 | 708.9 | 0.14 |
| 2024 | 5.3 | 114.1 | 26.1 | 170.3 | - | 599.5 | 952.7 | 0.13 |
| 2025[g/] | 8.1 | 132.3 | 15.4 | 131.8 | - | 473.1 | 768.6 | 0.18 |

a/ The OPI area includes ocean and inside harvest impacts and escapement to streams and lakes south of Leadbetter Pt., Washington.

b/ Includes estimated non-retention mortalities; troll: release mort.(1982-present) and drop-off mort.(all yrs.); sport: release mort.(1994-present) and drop-off mort.(all yrs.).

c/ Includes STEP smolt releases through the 2007 return year, after which the program was terminated.

d/ Includes Rogue River.

e/ FRAM post-season runs used after 1985 and includes OPI origin stock catches in all fisheries.

f/ Private hatchery stocks are excluded in calculating the OPI area stock aggregate ocean exploitation rate index.

g/ Preliminary.

TABLE III-3. Preseason forecasts and postseason estimates of ocean abundance for selected Washington coastal adult natural coho stocks in thousands of fish. (Page 1 of 2)

| Year or Ave. | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season |
|---|---|---|---|---|---|---|---|---|---|
| | | **Quillayute River Fall** | | | **Hoh River** | | | **Queets River** | |
| 1991-1995 | 15.4 | 16.2 | 1.07 | 7.1 | 8.5 | 1.32 | 11.9 | 14.0 | 1.2 |
| 1996 | 13.0 | 20.3 | 0.64 | 4.2 | 7.7 | 0.54 | 8.3 | 22.6 | 0.37 |
| 1997 | 8.9 | 5.8 | 1.53 | 2.8 | 4.1 | 0.68 | 4.3 | 2.2 | 1.92 |
| 1998 | 8.0 | 17.4 | 0.46 | 3.4 | 5.6 | 0.61 | 4.2 | 6.3 | 0.66 |
| 1999 | 14.5 | 16.1 | 0.90 | 3.2 | 6.8 | 0.47 | 4.3 | 8.6 | 0.50 |
| 2000 | 8.7 | 16.5 | 0.53 | 3.5 | 9.3 | 0.38 | 2.7 | 12.1 | 0.22 |
| 2001 | 23.0 | 28.4 | 0.81 | 8.5 | 16.2 | 0.52 | 12.0 | 35.8 | 0.33 |
| 2002 | 22.3 | 33.2 | 0.67 | 8.5 | 13.2 | 0.64 | 12.5 | 26.3 | 0.47 |
| 2003 | 24.9 | 22.5 | 1.11 | 12.5 | 8.7 | 1.44 | 24.0 | 15.7 | 1.52 |
| 2004 | 21.2 | 20.7 | 1.02 | 8.1 | 6.9 | 1.17 | 18.5 | 13.3 | 1.39 |
| 2005 | 18.6 | 20.9 | 0.89 | 7.6 | 8.2 | 0.93 | 17.1 | 11.9 | 1.43 |
| 2006 | 14.6 | 9.9 | 1.48 | 6.4 | 2.7 | 2.36 | 8.3 | 9.2 | 0.90 |
| 2007 | 10.8 | 10.7 | 1.01 | 5.4 | 5.8 | 0.93 | 13.6 | 7.1 | 1.92 |
| 2008 | 10.5 | 11.1 | 0.95 | 4.3 | 4.3 | 1.00 | 10.2 | 7.4 | 1.39 |
| 2009 | 19.3 | 15.5 | 1.24 | 9.5 | 9.5 | 1.00 | 31.4 | 16.0 | 1.97 |
| 2010 | 22.0 | 17.1 | 1.29 | 7.6 | 11.4 | 0.67 | 21.8 | 19.9 | 1.09 |
| 2011 | 28.2 | 13.3 | 2.11 | 11.6 | 13.0 | 0.89 | 13.3 | 15.1 | 0.88 |
| 2012 | 33.5 | 12.8 | 2.61 | 14.3 | 8.1 | 1.77 | 37.2 | 9.1 | 4.08 |
| 2013 | 17.2 | 15.8 | 1.09 | 8.6 | 9.2 | 0.94 | 24.5 | 9.9 | 2.48 |
| 2014 | 18.4 | 17.3 | 1.07 | 8.9 | 9.1 | 0.97 | 10.3 | 12.8 | 0.80 |
| 2015 | 10.5 | 4.8 | 2.19 | 5.1 | 2.9 | 1.74 | 7.5 | 2.7 | 2.75 |
| 2016 | 4.5 | 11.7 | 0.38 | 2.1 | 5.4 | 0.39 | 3.5 | 6.5 | 0.54 |
| 2017 | 15.8 | 12.9 | 1.22 | 6.2 | 6.0 | 1.03 | 6.5 | 6.8 | 0.96 |
| 2018 | 10.6 | 8.7 | 1.22 | 5.8 | 3.7 | 1.56 | 7.0 | 3.4 | 2.04 |
| 2019 | 14.8 | 10.9 | 1.36 | 7.0 | 5.2 | 1.36 | 11.2 | 3.9 | 2.84 |
| 2020 | 9.2 | 9.1 | 1.01 | 4.2 | 5.4 | 0.77 | 7.8 | 5.1 | 1.53 |
| 2021 | 7.5 | 10.4 | 0.73 | 3.0 | 7.8 | 0.39 | 3.9 | 5.0 | 0.78 |
| 2022 | 12.5 | 16.3 | 0.77 | 4.7 | 11.7 | 0.40 | 18.2 | 17.8 | 1.02 |
| 2023 | 13.5 | 10.6 | 1.27 | 6.5 | 6.5 | 1.01 | 12.4 | 7.5 | 1.66 |
| 2024 | 10.2 | 8.8 | 1.16 | 4.9 | 7.5 | 0.65 | 12.8 | 9.8 | 1.31 |
| 2025 | 10.9 | - | - | 5.4 | - | - | 9.0 | - | - |
| 2026 | 12.9 | - | - | 6.5 | - | - | 10.4 | - | - |

TABLE III-3. Preseason forecasts and postseason estimates of age-3 ocean abundance for selected Washington coastal adult natural coho stocks in thousands of fish.[a/]
(Page 2 of 2)

| Year or Ave. | Preseason Forecast | Postseason Return | Pre/Post-season | Preseason Forecast | Postseason Return | Pre/Post-season |
|---|---|---|---|---|---|---|
| | | **Grays Harbor** | | | **Willapa Bay** | |
| 1991-1995 | 122.8 | 68.0 | 2.18 | | | |
| 1996 | 121.4 | 89.7 | 1.35 | | | |
| 1997 | 26.1 | 20.2 | 1.29 | | | |
| 1998 | 30.1 | 46.4 | 0.65 | | | |
| 1999 | 57.7 | 42.7 | 1.35 | | | |
| 2000 | 47.8 | 51.9 | 0.92 | | | |
| 2001 | 51.3 | 103.2 | 0.50 | | | |
| 2002 | 55.4 | 142.0 | 0.39 | | Data not available | |
| 2003 | 58.0 | 108.4 | 0.54 | | until 2010 | |
| 2004 | 117.9 | 90.8 | 1.30 | | | |
| 2005 | 91.1 | 65.9 | 1.38 | | | |
| 2006 | 67.3 | 30.6 | 2.20 | | | |
| 2007 | 59.4 | 34.6 | 1.72 | | | |
| 2008 | 42.7 | 49.0 | 0.87 | | | |
| 2009 | 59.2 | 104.6 | 0.57 | | | |
| 2010 | 67.9 | 117.4 | 0.58 | 20.4 | 101.1 | 0.20 |
| 2011 | 89.1 | 86.2 | 1.03 | 47.8 | 61.6 | 0.78 |
| 2012 | 150.2 | 103.9 | 1.45 | 81.3 | 40.6 | 2.00 |
| 2013 | 196.8 | 80.3 | 2.45 | 58.6 | 36.7 | 1.60 |
| 2014 | 108.8 | 152.9 | 0.71 | 58.9 | 95.6 | 0.62 |
| 2015 | 142.6 | 31.7 | 4.50 | 42.9 | 18.6 | 2.30 |
| 2016 | 35.7 | 35.3 | 1.01 | 39.5 | 40.5 | 0.98 |
| 2017 | 50.0 | 37.3 | 1.34 | 36.7 | 14.3 | 2.56 |
| 2018 | 42.5 | 60.8 | 0.70 | 20.7 | 17.0 | 1.21 |
| 2019 | 71.8 | 51.0 | 1.41 | 63.4 | 19.4 | 3.27 |
| 2020 | 50.0 | 31.6 | 1.58 | 17.9 | 18.5 | 0.96 |
| 2021 | 44.8 | 77.4 | 0.58 | 19.0 | 29.8 | 0.64 |
| 2022 | 120.4 | 79.4 | 1.52 | 35.8 | 22.7 | 1.58 |
| 2023 | 102.8 | 59.1 | 1.74 | 42.7 | 22.7 | 1.88 |
| 2024 | 74.9 | 66.5 | 1.13 | 29.5 | 23.1 | 1.28 |
| 2025 | 62.2 | - | - | 28.0 | - | - |
| 2026 | 71.9 | - | - | 26.5 | - | - |

a/ Coho FRAM was used to estimate post-season ocean abundance.

b/ In 1993 and 1994 preseason forecasts were a range of 144-153 and 53.8-60.2 respectively. The midpoint of each range was used in calculating the 1991-1995 average.

TABLE III-4. Preseason forecasts and postseason estimates of ocean abundance for selected Puget Sound adult natural coho stocks in thousands of fish[a/]. (Page 1 of 2)

| Year or Ave. | Preseason Forecast[b/] | Postseason Return | Pre/Postseason | Preseason Forecast | Postseason Return | Pre/Postseason | Preseason Forecast | Postseason Return | Pre/Postseason |
|---|---|---|---|---|---|---|---|---|---|
| | | **Skagit River** | | | **Stillaguamish River** | | | **Hood Canal** | |
| 1991-1995 | NA | 82.0 | - | 53.6 | 18.1 | 3.74 | 94.2 | 14.2 | 6.63 |
| 1996 | NA | 48.3 | - | 51.6 | 12.5 | 4.13 | 25.1 | 37.2 | 0.67 |
| 1997 | 70.9 | 63.1 | 1.12 | 36.0 | 14.1 | 2.56 | 78.4 | 101.8 | 0.77 |
| 1998 | 55.0 | 95.1 | 0.58 | 47.8 | 31.1 | 1.54 | 108.0 | 118.5 | 0.91 |
| 1999 | 75.7 | 40.9 | 1.85 | 35.7 | 7.5 | 4.77 | 65.1 | 17.6 | 3.70 |
| 2000 | 30.2 | 95.2 | 0.32 | 17.7 | 31.2 | 0.57 | 61.0 | 39.7 | 1.54 |
| 2001 | 87.2 | 132.5 | 0.66 | 24.4 | 81.8 | 0.30 | 62.0 | 110.0 | 0.56 |
| 2002 | 98.5 | 71.8 | 1.37 | 19.7 | 30.4 | 0.65 | 34.9 | 81.0 | 0.43 |
| 2003 | 116.6 | 114.1 | 1.02 | 37.8 | 49.8 | 0.76 | 33.4 | 199.9 | 0.17 |
| 2004 | 155.8 | 145.3 | 1.07 | 38.0 | 73.9 | 0.51 | 98.7 | 219.7 | 0.45 |
| 2005 | 61.8 | 52.4 | 1.18 | 56.7 | 29.1 | 1.95 | 98.4 | 68.3 | 1.44 |
| 2006 | 106.6 | 11.5 | 9.25 | 45.0 | 11.8 | 3.81 | 59.4 | 49.7 | 1.20 |
| 2007 | 26.8 | 83.0 | 0.32 | 69.2 | 45.2 | 1.53 | 42.4 | 78.6 | 0.54 |
| 2008 | 61.4 | 35.5 | 1.73 | 31.0 | 15.3 | 2.03 | 30.4 | 25.8 | 1.18 |
| 2009 | 33.4 | 87.5 | 0.38 | 13.4 | 27.4 | 0.49 | 48.6 | 45.7 | 1.06 |
| 2010 | 95.9 | 64.6 | 1.48 | 25.9 | 16.8 | 1.55 | 33.2 | 14.5 | 2.29 |
| 2011 | 138.1 | 78.1 | 1.77 | 66.6 | 61.3 | 1.09 | 74.7 | 56.8 | 1.31 |
| 2012 | 48.3 | 139.1 | 0.35 | 47.5 | 60.6 | 0.78 | 73.4 | 125.5 | 0.58 |
| 2013 | 137.2 | 150.7 | 0.91 | 33.1 | 78.1 | 0.42 | 36.8 | 37.9 | 0.97 |
| 2014 | 112.4 | 51.7 | 2.17 | 32.5 | 49.1 | 0.66 | 82.8 | 69.6 | 1.19 |
| 2015 | 121.4 | 15.5 | 7.82 | 31.3 | 5.6 | 5.59 | 61.5 | 63.7 | 0.96 |
| 2016 | 8.9 | 44.7 | 0.20 | 2.8 | 15.6 | 0.18 | 35.3 | 31.8 | 1.11 |
| 2017 | 11.2 | 22.3 | 0.50 | 7.6 | 6.9 | 1.10 | 115.6 | 35.0 | 3.31 |
| 2018 | 59.4 | 36.9 | 1.61 | 19.0 | 30.9 | 0.62 | 59.9 | 18.7 | 3.20 |
| 2019 | 58.2 | 27.5 | 2.12 | 23.9 | 16.2 | 1.48 | 40.4 | 14.7 | 2.76 |
| 2020 | 31.0 | 41.5 | 0.75 | 19.5 | 24.7 | 0.79 | 35.0 | 23.6 | 1.48 |
| 2021 | 58.4 | 112.0 | 0.52 | 26.8 | 42.7 | 0.63 | 28.8 | 45.7 | 0.63 |
| 2022 | 80.4 | 124.0 | 0.65 | 24.9 | 59.7 | 0.42 | 20.2 | 20.0 | 1.01 |
| 2023 | 43.1 | 74.9 | 0.58 | 30.2 | 46.3 | 0.65 | 37.9 | 49.9 | 0.76 |
| 2024 | 63.4 | 133.9 | 0.47 | 30.8 | 47.8 | 0.64 | 36.5 | 87.2 | 0.42 |
| 2025 | 66.3 | - | - | 27.5 | - | - | 20.0 | - | - |
| 2026 | 159.7 | - | - | 37.9 | - | - | 21.0 | - | - |

TABLE III-4. Preseason and postseason estimates of ocean abundance for selected Puget Sound adult natural coho stocks in thousands of fish[a/]. (Page 2 of 2)

| Year or Ave. | Preseason Forecast | Postseason Return | Pre/Postseason | Preseason Forecast | Postseason Return | Pre/Postseason |
|---|---|---|---|---|---|---|
| | | **Snohomish** | | | **Strait of Juan de Fuca** | |
| 1991-1995 | 341.6 | 200.6 | 1.85 | 20.6 | 19.3 | 1.22 |
| 1996 | 338.1 | 132.3 | 2.55 | 10.7 | 19.4 | 0.55 |
| 1997 | 186.6 | 106.4 | 1.75 | 6.5 | 20.3 | 0.32 |
| 1998 | 165.3 | 193.9 | 0.85 | 16.8 | 21.0 | 0.80 |
| 1999 | 141.6 | 82.2 | 1.72 | 14.7 | 9.9 | 1.48 |
| 2000 | 53.0 | 154.6 | 0.34 | 13.5 | 28.6 | 0.47 |
| 2001 | 129.6 | 360.1 | 0.36 | 21.4 | 43.9 | 0.49 |
| 2002 | 123.1 | 185.5 | 0.66 | 21.3 | 26.3 | 0.81 |
| 2003 | 203.0 | 198.0 | 1.03 | 25.6 | 22.9 | 1.12 |
| 2004 | 192.1 | 287.9 | 0.67 | 35.7 | 23.8 | 1.50 |
| 2005 | 241.6 | 133.4 | 1.81 | 20.7 | 12.5 | 1.66 |
| 2006 | 139.5 | 94.2 | 1.48 | 26.1 | 4.6 | 5.65 |
| 2007 | 98.9 | 156.4 | 0.63 | 29.9 | 10.2 | 2.92 |
| 2008 | 92.0 | 49.5 | 1.86 | 24.1 | 3.9 | 6.25 |
| 2009 | 67.0 | 133.4 | 0.50 | 20.5 | 24.7 | 0.83 |
| 2010 | 99.4 | 54.4 | 1.83 | 8.5 | 20.1 | 0.42 |
| 2011 | 180.0 | 137.4 | 1.31 | 12.3 | 11.7 | 1.05 |
| 2012 | 109.0 | 175.8 | 0.62 | 12.6 | 12.5 | 1.01 |
| 2013 | 163.8 | 176.0 | 0.93 | 12.6 | 9.8 | 1.29 |
| 2014 | 150.0 | 66.6 | 2.25 | 12.5 | 13.8 | 0.91 |
| 2015 | 151.5 | 28.3 | 5.35 | 11.1 | 4.7 | 2.36 |
| 2016 | 20.6 | 54.1 | 0.38 | 4.4 | 8.7 | 0.51 |
| 2017 | 107.3 | 23.2 | 4.63 | 13.1 | 5.9 | 2.24 |
| 2018 | 66.3 | 77.6 | 0.85 | 7.2 | 5.9 | 1.21 |
| 2019 | 62.9 | 48.7 | 1.29 | 8.8 | 5.3 | 1.68 |
| 2020 | 39.0 | 47.7 | 0.82 | 7.5 | 9.2 | 0.82 |
| 2021 | 60.0 | 109.9 | 0.55 | 6.7 | 22.5 | 0.30 |
| 2022 | 64.2 | 93.2 | 0.69 | 7.3 | 18.4 | 0.40 |
| 2023 | 76.5 | 79.7 | 0.96 | 15.6 | 14.9 | 1.05 |
| 2024 | 71.6 | 95.3 | 0.75 | 19.7 | 14.4 | 1.37 |
| 2025 | 59.0 | - | - | 14.0 | - | - |
| 2026 | 75.8 | - | - | 9.8 | - | - |

a/ Coho FRAM was used to estimate post season ocean abundance.

b/ Preseason forecasts in 1986-1996 were based on accounting system that signficantly underestimated escapement and are not comparable to post season.

TABLE III-5. 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 | 60% | Normal |
| Stillaguamish | 50% | Normal |
| Snohomish | 40% | Low |
| 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 | 60% | Abundant |
| Stillaguamish | 50% | Abundant |
| Snohomish | 40% | Moderate |
| Hood Canal | 45% | Moderate |
| Strait of Juan de Fuca | 20% | Low |
| Quillayute Fall[c/] | 51% | Abundant |
| Hoh[c/] | 69% | Abundant |
| Queets[c/] | 44% | Abundant |
| Grays Harbor[c/d/] | 56% | Abundant |

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

b/ Preliminary. For Puget Sound and Washington Coast management units, the exploitation rate constraints reflect application of the 2019 PST Southern Coho Management Plan.

c/ Categories (Abundant, Moderate, Low ) correspond to the general exploitation rate ranges depicted in paragraph 8(b)(iii) of the 2019 PST Southern Coho Management Plan. For Washington Coast stocks, categorical status is determined by the exploitation rate associated w ith meeting the escapement goal (or the low er end of the escapement goal range). As Washington Coast stocks are managed to achieve agreed escapment goals, this exploitation rate also becomes an approximation of the maximum allow able rate unless the stock is in the "Low " status. In that case, an ER of up to 20% is allow ed.

d/ Based on projected natural area spaw ners (w ild plus hatchery strays) and MSP escapement goal of 35,400. Exploitation rate constraint subject to change should comanagers agree to a modified escapement goal under *U.S. v. Washington* and *Hoh v. Baldrige* case law .

TABLE III-6. Projected coho mark rates for 2026 U.S. forecasts under base period fishing patterns (percent marked).

| Area | Fishery | June | July | August | Sept |
|---|---|---|---|---|---|
| Canada | | | | | |
| Johnstone Strait | Recreational | -- | 26% | 22% | -- |
| West Coast Vancouver Island | Recreational | 46% | 42% | 43% | 48% |
| North Georgia Strait | Recreational | 44% | 45% | 44% | 38% |
| South Georgia Strait | Recreational | 48% | 50% | 44% | 47% |
| Juan de Fuca Strait | Recreational | 41% | 43% | 43% | 42% |
| Johnstone Strait | Troll | 52% | 42% | 34% | 40% |
| NW Vancouver Island | Troll | 49% | 43% | 44% | 44% |
| SW Vancouver Island | Troll | 52% | 48% | 48% | 49% |
| Georgia Strait | Troll | 53% | 53% | 54% | 49% |
| Puget Sound | | | | | |
| Strait of Juan de Fuca (Area 5) | Recreational | 48% | 45% | 45% | 45% |
| Strait of Juan de Fuca (Area 6) | Recreational | 44% | 43% | 45% | 41% |
| San Juan Island (Area 7) | Recreational | 47% | 51% | 45% | 32% |
| North Puget Sound (Areas 6 & 7A) | Net | -- | 49% | 47% | 38% |
| Council Area | | | | | |
| Neah Bay (Area 4/4B) | Recreational | 39% | 48% | 47% | 52% |
| LaPush (Area 3) | Recreational | 45% | 51% | 54% | 53% |
| Westport (Area 2) | Recreational | 57% | 56% | 56% | 56% |
| Columbia River (Area 1) | Recreational | 59% | 60% | 56% | 58% |
| Tillamook | Recreational | 54% | 51% | 46% | 33% |
| Newport | Recreational | 49% | 46% | 43% | 31% |
| Coos Bay | Recreational | 39% | 36% | 26% | 14% |
| Brookings | Recreational | 34% | 25% | 24% | 13% |
| Neah Bay (Area 4/4B) | Troll | 48% | 49% | 48% | 48% |
| LaPush (Area 3) | Troll | 50% | 51% | 48% | 49% |
| Westport (Area 2) | Troll | 50% | 53% | 54% | 58% |
| Columbia River (Area 1) | Troll | 58% | 58% | 57% | 50% |
| Tillamook | Troll | 53% | 51% | 50% | 50% |
| Newport | Troll | 49% | 48% | 42% | 42% |
| Coos Bay | Troll | 38% | 35% | 31% | 19% |
| Brookings | Troll | 31% | 34% | 36% | 54% |
| Columbia River | | | | | |
| Buoy 10 | Recreational | -- | -- | -- | 58% |

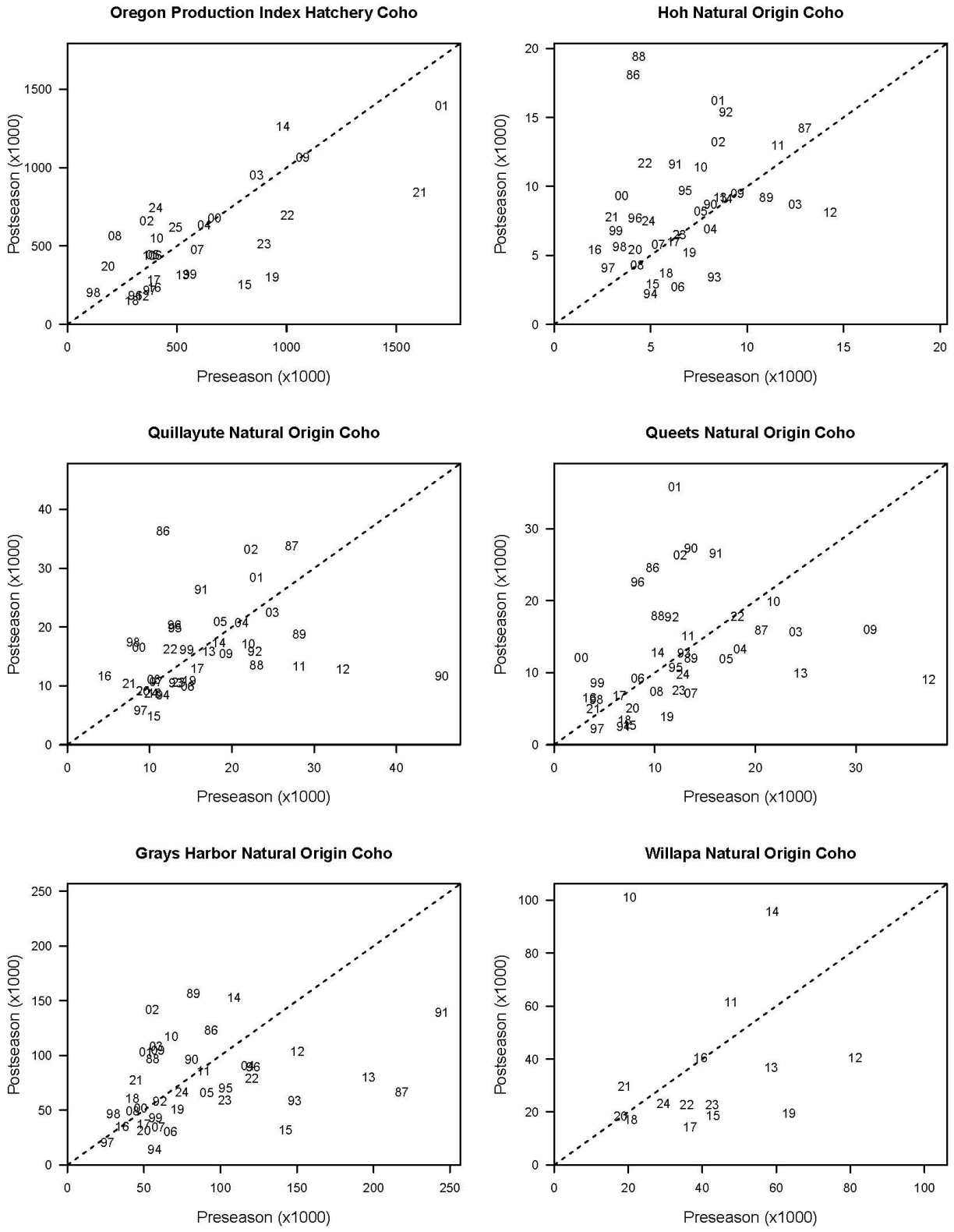


FIGURE III-1a. Selected preseason vs. postseason forecasts for coho stocks with substantial contribution to Council area fisheries.

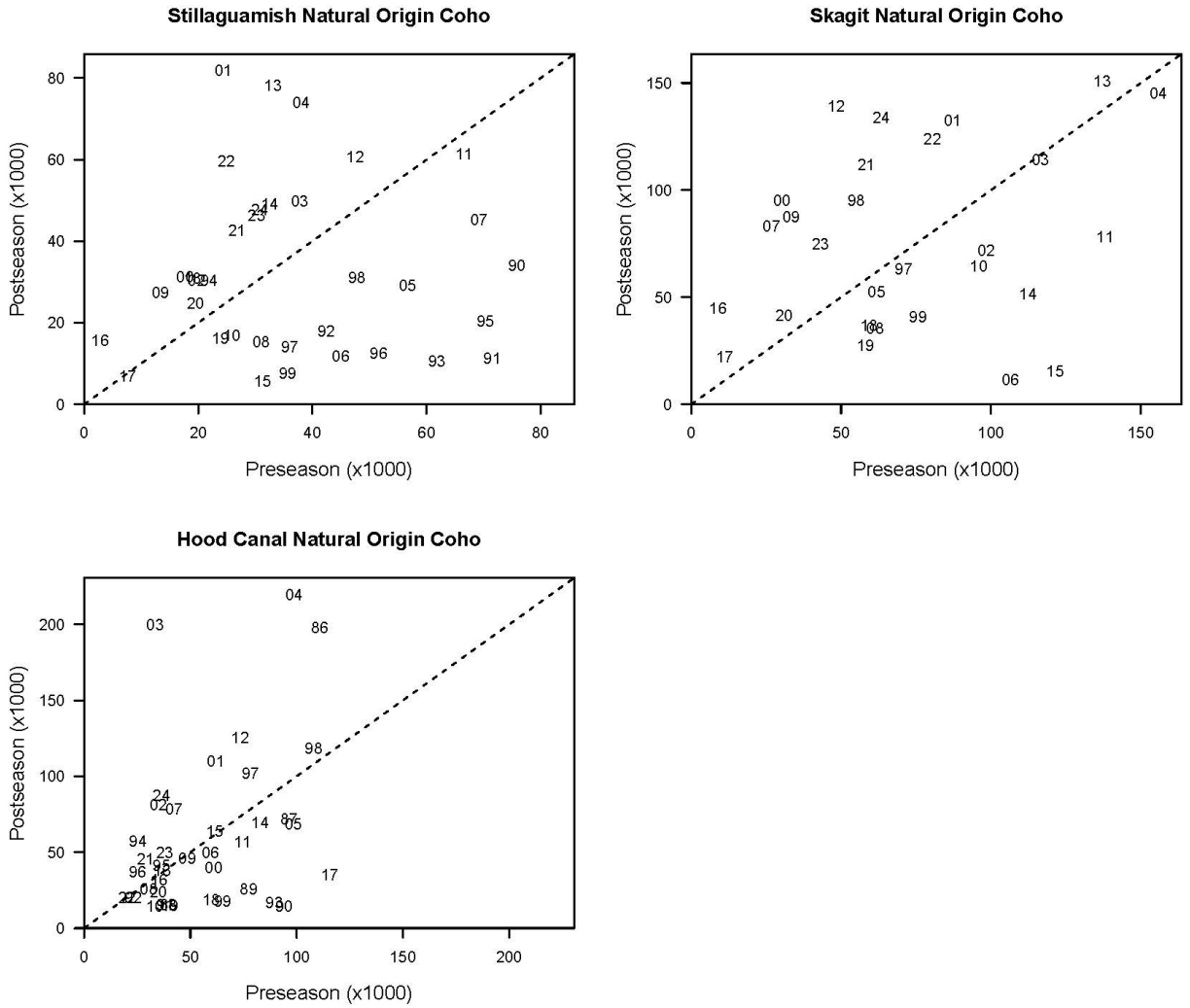


FIGURE III-1b. Selected preseason vs. postseason forecasts for coho stocks with substantial contribution to Council area fisheries.

## CHAPTER IV: AFFECTED ENVIRONMENT - PINK SALMON ASSESSMENT

Two major runs comprise the pink salmon population available to Council fisheries during odd-numbered years: the Puget Sound run, and the Fraser River (British Columbia) run, the latter is the more abundant of the two. The 2023 pink salmon run size forecasts were 3,950,917 for the Puget Sound and 6,135,000 for the Fraser River. The actual 2023 run size was 7,222,610 in Puget Sound and 10,513,300 in the Fraser River. The 2025 pink salmon run size forecasts are 7,756,232 for the Puget Sound and 26,965,000 for the Fraser River. The final accounted 2025 run size for the Fraser River and the actual run size for Puget Sound is not available. See Table IV-1 for details.

TABLE IV-1. Estimated annual (odd-numbered years) run sizes and forecasts for Fraser River and Puget Sound pink salmon in millions of fish.

| | Puget Sound | | Fraser River[a/] | |
|---|---|---|---|---|
| Year | Forecast | Actual | Forecast | Actual |
| 1977 | NA | 0.88 | NA | 8.21 |
| 1979 | NA | 1.32 | NA | 14.40 |
| 1981 | NA | 0.50 | NA | 18.69 |
| 1983 | NA | 1.01 | NA | 15.35 |
| 1985 | NA | 1.76 | NA | 19.04 |
| 1987 | NA | 1.57 | NA | 7.17 |
| 1989 | NA | 1.93 | NA | 16.48 |
| 1991 | NA | 1.09 | NA | 22.18 |
| 1993 | NA | 1.06 | NA | 16.98 |
| 1995 | 3.4 | 2.08 | NA | 12.90 |
| 1997 | NA | 0.44 | 11.40 | 8.18 |
| 1999 | NA | 0.96 | NA | 3.61 |
| 2001 | 2.92 | 3.56 | 5.47 | 21.26 |
| 2003 | 2.32 | 2.90 | 17.30 | 24.25 |
| 2005 | 1.98 | 1.23 | 16.32 | 9.87 |
| 2007 | 3.34 | 2.45 | 19.60 | 8.49 |
| 2009 | 5.16 | 9.84 | 17.54 | 19.94 |
| 2011 | 5.98 | 5.27 | 17.50 | 20.65 |
| 2013 | 6.27 | 8.75 | 8.93 | 15.90 |
| 2015 | 6.76 | 3.70 | 14.50 | 5.87 |
| 2017 | 1.15 | 0.51 | 8.69 | 3.56 |
| 2019 | 0.61 | 2.94 | 5.02 | 8.86 |
| 2021 | 2.93 | 3.77 | 3.01 | 8.11 |
| 2023 | 3.95 | 7.22 | 6.14 | 10.51 |
| 2025 | 7.76 | NA | 26.97 | NA |

a/ Total run size.

# CHAPTER V: DESCRIPTION AND ANALYSIS OF THE NO-ACTION ALTERNATIVE

The No-Action Alternative consists of the preseason management measures adopted by the Council and approved by the Secretary of Commerce for the 2025 ocean salmon season between the U.S./Canada border and the U.S./Mexico border. The management measures relate to three fishery sectors: non-Indian commercial (Table V-1), recreational (Table V-2), and treaty Indian (Table V-3). A description of the 2025 preseason management measures and analyses of their projected effects on the biological and socioeconomic environment are presented in Preseason Report III (PFMC 2025c). A description of the 2025 management measures as implemented, including inseason modifications, and an analysis of their effects on the environment, including a historical perspective, is presented in the SAFE document - *Review of 2025 Ocean Salmon Fisheries* (PFMC 2026).

## *5.1 ANALYSIS OF EFFECTS ON THE ENVIRONMENT OF THE NO-ACTION ALTERNATIVE*

### 5.1.1 Overview

Table V-4 provides a summary, where possible, of Salmon FMP stock spawning escapement and exploitation rate projections for 2026 under the No-Action Alternative (2025 regulations), as well as postseason estimates of these quantities for earlier years, which are compared to FMP conservation objectives. For some stocks, postseason estimates of these metrics were either incomplete or unavailable when the *Review of 2025 Ocean Salmon Fisheries* (PFMC 2026) was published. A preliminary determination of stock status under the FMP Status Determination Criteria (SDC) was available for some of these stocks in time for this report; however, some estimates remain unavailable.

Chinook escapements and fishery impacts were forecast using the Sacramento Harvest Model, the Winter Run Harvest Model, and the Klamath Ocean Harvest Model for SRFC, SRWC, and KRFC, respectively. Assessment of effects under the No-Action Alternative for Oregon Coast, Columbia River, and Washington Coast Chinook are not currently available.

Coho escapements and fishery impacts were forecast using the Coho FRAM. Abundance forecasts for 2026 were updated for Washington and Oregon stocks, but forecasts for Canadian stocks are unchanged from those employed for 2025 planning. Updated forecasts for Canadian stocks are expected to become available in March 2026. To provide information on the effects of changes in abundance forecasts, the final 2025 preseason regulatory package for ocean and inside fisheries was applied to 2026 projections of abundance.

### 5.1.2 Sacramento River Fall Chinook Stock

A repeat of 2025 regulations would be expected to result in an escapement of 353,389 hatchery and natural area SRFC adults. This projection is higher than the minimum escapement level specified by the control rule for 2026 (188,328), $S_{MSY}$ (122,000), and the 2026 preseason $S_{ACL}$ (188,328; Tables V-4 and V-5). The geometric mean of the 2024 and 2025 spawning escapement estimates and the 2026 forecast spawning escapement under the No-Action Alternative is greater than the MSST and the $S_{MSY}$ (Table V-4). The predicted SRFC exploitation rate under the No-Action Alternative is 10 percent, which is below the MFMT (58 percent; Table V-4) and the maximum allowable rate specified by the control rule for 2026 (52.0 percent). If the ocean fisheries were closed from January through August 2026 between Cape Falcon and the U.S./Mexico border, and Sacramento Basin fisheries were closed in 2026, the expected number of hatchery and natural area adult spawners would be 383,951.

The 2025 estimate of SRFC escapement was 164,763 hatchery and natural area adults, which is greater than the 2025 postseason $S_{ACL}$ of 84,680 and the $S_{OFL}$ of 74,095 (Table V-5).

### 5.1.3 Sacramento River Winter Chinook Stock

A repeat of 2025 regulations would be expected to result in an age-3 impact rate of 1.6 percent for the area south of Point Arena, California. The 2026 forecast age-3 impact rate under the No-Action Alternative is lower than the 2025 maximum allowable rate of 20.0 percent.

### 5.1.4 Klamath River Fall Chinook Stock

A repeat of 2025 regulations, which included a river recreational harvest allocation of 70.6 percent of the non-tribal harvest and a tribal allocation of 50 percent of the overall adult harvest, would be expected to result in 37,730 natural area adult spawners. This projection is greater than the minimum escapement level specified by the control rule for 2026 (30,143), less than $S_{MSY}$ (40,700), and greater than the 2026 preseason $S_{ACL}$ (12,861; Tables V-4 and V-5). The geometric mean of the 2024 and 2025 natural area adult spawner escapement estimates and the 2026 forecast spawning escapement under the No-Action Alternative is greater than the MSST and less than the $S_{MSY}$ (Table V-4). The predicted KRFC exploitation rate under the No-Action Alternative is 6.1 percent, which is lower than the MFMT (71.0 percent; Table V-4) and lower than the maximum allowable rate specified by the control rule for 2026 (25.0 percent). If the ocean fisheries were closed from January through August 2026 between Cape Falcon and Point Sur, and the Klamath Basin fisheries (tribal and recreational) were closed in 2026, the expected number of natural area adult spawners would be 40,191.

The 2025 estimate of KRFC escapement was 39,869 natural area adults, which exceeds the 2025 postseason $S_{ACL}$ (Table V-5).

### 5.1.5 California Coastal Chinook Stocks

The NMFS ESA consultation standard restricts the KRFC age-4 ocean harvest rate to no more than 16.0 percent to limit impacts on these stocks. The postseason estimate of this rate for 2025 is 2.2 percent. Applying 2025 regulations to the 2026 KRFC abundance results in an age-4 ocean harvest rate forecast of 1.7 percent.

If the ocean fisheries were closed from January through August 2026 between Cape Falcon and Point Sur, the expected age-4 ocean harvest rate would be zero percent (0 age-4 KRFC were harvested during the September through November 2025 period).

### 5.1.6 Oregon Coast Chinook Stocks

The FMP conservation objective for the northern and central Oregon coast Chinook stock complexes is based on a total goal of 150,000 to 200,000 natural area adult spawners. For these two stock complexes, attainment of goals is assessed using peak spawner counts observed in standard index reaches for the respective complexes. For the southern Oregon coast Chinook stock complex, the FMP conservation objective is assessed using the escapement estimate at Huntley Park on the Rogue River. Forecasts are not available for all these stocks, but given recent trends, the escapement goals may be met for all stocks in 2026 under 2025 fishing seasons (Table V-4).

### 5.1.7 Columbia River Chinook Stocks

The 2026 forecasts for Columbia River spring Chinook originating from both below and above Bonneville dam are mixed when compared with 2025 forecasts. The 2026 forecast for summer Chinook is greater than the 2025 forecast. The 2026 aggregate forecast for fall Chinook (650,900) is less than the 2025 aggregate

forecast (717,100). Given these differences in the stock-specific forecasts for 2026 relative to 2025, applying 2025 regulations to the forecasted 2026 abundance of Columbia River Chinook should result in ocean escapements meeting spawning escapement goals for all summer and fall Chinook stocks (Table V-4).

### 5.1.8 Washington Coast and Puget Sound Chinook Stocks

Council fisheries north of Cape Falcon have a negligible impact on Washington coast Chinook stocks and a minor impact on stocks that originate in Puget Sound. These stocks have northerly marine distribution patterns and are therefore impacted primarily by Canadian and Alaskan fisheries. Thus, an evaluation of 2025 Council area management measures on projected 2026 abundance would not provide a useful comparison of fishery impacts in relation to conservation objectives.

### 5.1.9 Oregon Production Index Area Coho Stocks

Projected exploitation rates of LCN, OCN, and SONCC coho, under Council-adopted 2025 regulations and preliminary 2026 preseason forecasts are presented in Table V-7. The 2026 allowable LCN coho exploitation rate is expected to be 23.0 percent and the allowable OCN coho exploitation rate is expected to be 30.0 percent based on the existing management framework. Under 2025 regulations, fishery impact rates slightly increase for LCN coho, increase for OCN coho, and stay the same for SONCC coho except for a slight increase to the Rouge population when compared to 2025 preseason projections. LCN coho total impacts rise to 21.6 percent, below the expected 23 percent maximum allowable exploitation rate for 2026. SONCC coho total ocean exploitation is projected at 1.6 percent, remaining the same as in 2025. The OCN coho projected total exploitation under this scenario is 29.4 percent, lower than the expected 2026 maximum allowable exploitation rate of 30 percent. Predicted ocean escapements (after Buoy 10) into the Columbia River in 2026 show that under 2025 ocean regulations, Columbia River early and late coho would be expected to meet hatchery return goals (Table V-6).

### 5.1.10 Washington Coast, Puget Sound, and Canadian Coho Stocks

Exploitation rate and ocean escapement expectations in relation to management goals for select naturally spawning coho stocks, given 2026 preseason abundance forecasts and 2025 preseason projections for fishing patterns, are presented in Table V-6. The 2026 forecasts for Canadian coho stocks are not available but are assumed to be at 2025 levels for this analysis. More detailed fishery management goals for Council area coho stocks are listed in Appendix A.

Based on the geometric mean of the two most recent spawning escapement estimates and the 2026 forecasted spawning escapement under the No-Action Alternative, there are no coho stocks that meet the criteria for being at risk of approaching an overfished condition (Table V-4).

Under the No-Action Alternative, FMP exploitation rate conservation objectives applicable for 2026 would be met for all Puget Sound natural coho stocks. Ocean escapements for Washington Coast natural coho stocks are above FMP spawning escapement conservation objectives. Management objectives for U.S. Puget Sound natural coho stocks subject to the PST are identical to FMP objectives and would be met under 2025 regulations for all stocks; all Washington Coast natural stocks would also meet PST management objectives under 2025 regulations.

The exploitation rate by U.S. fisheries south of the Canadian border on Interior Fraser (B.C.) coho is projected to be 9.0 percent, which is below the anticipated 10.0 percent allowable exploitation rate under the 2019 PST Southern Coho Management Plan. The Council area fisheries portion would be 3.5 percent.

### 5.1.11 Summary

The effects of projected impacts (where available) under 2025 fishery regulations and 2026 abundance forecasts are as follows:

- The projected SRFC exploitation rate under the No-Action Alternative is lower than the maximum level specified by the control rule for 2026.
- SRFC are not at risk of approaching an overfished condition.
- For SRWC, the predicted age-3 impact rate is lower than the maximum allowable rate specified by the control rule.
- The projected KRFC exploitation rate under the No-Action Alternative is lower than the maximum level specified by the control rule.
- KRFC are not at risk of approaching an overfished condition.
- All Puget Sound and Washington Coast natural coho stocks would achieve $S_{MSY}$ spawning escapement objectives.
- No Puget Sound or Washington Coast natural coho stocks would be at risk of approaching an overfished condition.
- OCN coho would have a projected exploitation rate that complies with anticipated ESA consultation standards.
- LCN coho would have a projected exploitation rate that complies with anticipated ESA consultation standards.
- SONCC coho would have projected exploitation rates that comply with anticipated ESA consultation standards.
- All coho stocks would have exploitation rates below the MFMT.
- All Puget Sound coho stocks would have exploitation rates that comply with the annual rates allowed under the FMP harvest rate matrix and the allowable levels under the 2019 PST Southern Coho Management Plan.
- All Washington coastal coho stocks would have exploitation rates that comply with the annual rates allowed under the 2019 PST Southern Coho Management Plan.

### 5.1.12 Conclusion

The No-Action Alternative would meet the Purpose and Need for the proposed action.

The No-Action Alternative does not reflect consideration of changes in the status of salmon stocks from the previous year; therefore, over- or under- harvest of some salmon stocks would occur if this alternative were implemented. The analysis of the No-Action Alternative does, however, provide perspective that is useful in the planning process for 2026 ocean salmon fishery management measures. An understanding of stock shortfalls and surpluses under the No-Action Alternative helps managers, advisors, and constituents construct viable alternatives to the status-quo management measures.

TABLE V-1. 2025 Commercial troll management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 1 of 6)

**A. SEASON DESCRIPTIONS**

**North of Cape Falcon**

**Supplemental Management Information**

1. Overall non-Indian TAC: 115,000 Chinook and 108,000 coho marked with a healed adipose fin clip (marked).
2. Trade: Commercial troll traded 9,000 marked coho to the recreational fishery for 2,250 Chinook.
3. Non-Indian commercial troll TAC: 61,250 Chinook and 8,280 marked coho: all retained coho must be marked with a healed adipose fin clip.
4. For fisheries scheduled prior to May 16, 2025: See 2024 management measures, which are subject to inseason action.

**U.S./Canada Border to Cape Falcon**

- *May 1-15. See 2024 management measures, which are subject to inseason action.*
- May 16 through the earlier of June 29, or 36,800 Chinook.

Catch limits in place for the following areas (C.8):

U.S./Canada border to Queets River -
No more than 8,000 Chinook.

Leadbetter Pt. to Cape Falcon -
No more than 6,000 Chinook.

Landing and possession limits in place for the following areas. Landing limits will be evaluated weekly, inseason. Landing week is Thursday through Wednesday (C.1, C.6, C.8).

U.S./Canada border to Queets River -
100 Chinook per vessel per landing week.

Queets River to Leadbetter Pt. -
No weekly Chinook landing and possession limit.

Leadbetter Pt. to Cape Falcon -
80 Chinook per vessel per landing week.

Open seven days per week (C.1). All salmon, except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B). See compliance requirements (C.1) and gear restrictions and definitions (C.2, C.3).

If the Chinook quota is exceeded, the excess will be deducted from the all-salmon season (C.8).

In 2026, the season will open May 1 consistent with all preseason regulations in place in this area and subareas during May 16-June 29, 2025, including subarea salmon guidelines and quotas and weekly vessel limits. This opening could be modified following Council review at its March and/or April 2026 meetings.

**U.S./Canada Border to Cape Falcon**

- U.S./Canada Border to Leadbetter Point: July 1 through the earlier of September 15, or the U.S./Canada Border to Cape Falcon quotas of 24,450 Chinook or 8,280 marked coho (C.8).
- Leadbetter Point to Cape Falcon: July 1 through the earlier of September 30, or the U.S./Canada Border to Cape Falcon quotas of 24,450 Chinook or 8,280 marked coho (C.8).

Open seven days per week. All salmon. Chinook minimum size limit of 27 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).

July 1-9: landing and possession limit of 60 marked coho per vessel for the open period (C.6).

Beginning July 10: landing and possession limit of 60 marked coho per vessel per landing week (Thurs.-Wed.) (C.6).

Landing limits will be evaluated weekly, inseason (C.1, C.8.f).

**For all commercial troll fisheries north of Cape Falcon**:

Mandatory closed areas include Cape Flattery Control Zone, Salmon Troll Yelloweye Rockfish Conservation Area, and Columbia Control Zone. (C.5.a, C.5.b, C.5.d).

Vessels must land and deliver their salmon within 24 hours of any closure of this fishery (C.6). Vessels may not land fish east of the Sekiu River or east of Tongue Point, Oregon.

**During any single trip, only one side of the Leadbetter Point line may be fished** (C.11).

Vessels fishing for or in possession of salmon north 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. For delivery to Washington ports south of Leadbetter Point, vessels must notify WDFW 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 (C.11).

TABLE V-1. 2025 Commercial troll management measures for non-Indian ocean salmon fisheries–Council adopted.(Page 2 of 6)

**A. SEASON DESCRIPTIONS North of Cape Falcon (continued)**

Vessels fishing or in possession of salmon while fishing south 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, Washington permitted vessels may also land all species of fish north of Leadbetter Point. For delivery to Washington ports north of Leadbetter Point, vessels must notify WDFW 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 (C.11). All Chinook caught north of Cape Falcon and being delivered by boat to Garibaldi must meet the minimum legal total length of 28 inches for Chinook for south of Cape Falcon seasons unless the season in waters off Garibaldi have been closed for Chinook retention for more than 48 hours (C.1.).

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 541-857-2546 or sending notification via e-mail to nfalcon.trollreport@odfw.oregon.gov (C.11). 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).

Vessels in possession of salmon north of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination. Vessels in possession of salmon south of the Queets River may not cross the Queets River line without first notifying WDFW at 360-249-1215 with area fished, total Chinook, coho and halibut catch aboard, and destination (C.11). Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (C.8).

Vessels fishing in a subarea north of Cape Falcon with a higher limit may transit through and land in a subarea with a lower limit. Prior to crossing the subarea line at Leadbetter Point or Queets River, vessels must notify WDFW at 360-249-1215 with area fished, total Chinook, coho, and halibut catch aboard, and destination with approximate time of delivery (C.11).

**A. SEASON DESCRIPTIONS**

**South of Cape Falcon**

**Supplemental Management Information**

1. Sacramento River fall Chinook spawning escapement of 147,733 hatchery and natural area adults.
2. Sacramento Index exploitation rate of 10.8%.
3. Klamath River recreational fishery allocation: 978 adult Klamath River fall Chinook.
4. Klamath tribal allocation: 1,385 adult Klamath River fall Chinook.
5. CA/OR share of Klamath River fall Chinook commercial ocean harvest: 0%/100%.
6. Overall commercial troll coho TAC: 7,500.

**Cape Falcon to Heceta Bank Line**

- June 9-30;
- July 16-31.

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).

All fishers landing Chinook salmon south of the Heceta Bank Line are required to notify ODFW within one hour of delivery or prior to transport away from the port of landing by either calling 541-857-2546 or sending notification via e-mail to nfalcon.trollreport@odfw.oregon.gov (C.11.). Notification shall include vessel name and number, number of Chinook salmon, port of landing and location of delivery, and estimated time of delivery.

**Cape Falcon to Humbug Mt.**

- *April 10-May 15. See 2024 management measures and 2025 inseason actions. Dates may be subject to further inseason action.*
- May 16-31;
- September 1-October 31 (C.8, C.9.a).

Open seven days per week. All salmon except coho (C.4, C.7), except during the non-mark-selective coho fishery as described below (C.5). Chinook minimum size limit of 28 inches total length, coho minimum size limit of 16 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).

Beginning September 1, all salmon until the earlier of September 30 or a 7,500 non-mark-selective coho quota met. If the coho quota is met prior to September 30, then all salmon except coho season continues (C.4, C.7). No more than 75 coho per vessel per landing week when retention allowed and no more than 75 Chinook allowed per vessel per landing week (Thurs.-Wed.). Vessel limits may be modified inseason.

Oregon State regulations require all fishers landing coho salmon into Oregon from any fishery between Cape Falcon, OR and Humbug Mountain to notify ODFW within one hour of delivery or prior to transport away from the port of landing by either calling 541-857-2546 or sending notification via e-mail to nfalcon.trollreport@odfw.oregon.gov (C.11.). Notification shall include vessel name and number, number of salmon by species, port of landing and location of delivery, and estimated time of delivery.

In 2026, the season will open March 15 for all salmon except coho. 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. Gear restrictions (C.2, C.3) same as in 2025. This opening could be modified following Council review at its March 2026 meeting (C.8).

TABLE V-1. 2025 Commercial troll management measures for non-Indian ocean salmon fisheries–Council adopted.(Page 3 of 6)

**A. SEASON DESCRIPTIONS South of Cape Falcon**

**Humbug Mt. to OR/CA Border.**

- *April 15-30. See 2024 management measures and 2025 inseason actions. Dates may be subject to further inseason action.*
- Starting May 16, closed.

In 2026, 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 (C.2, C.3) same as in 2024. This opening could be modified following Council review at its March 2026 meeting (C.8).

**OR/CA Border to Humboldt South Jetty (California KMZ)**

- Closed.

In 2026, 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 (B, C.1). Landing and possession limit of 20 Chinook per vessel per week (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). Electronic Fish Tickets must be submitted within 24 hours of landing (C.12). 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 closure adjacent to the Smith River. This opening could be modified following Council review at its March and/or April 2026 meetings.

**Humboldt South Jetty to Latitude 40°10' N.**

- Closed.

**Latitude 40°10' N. to Point Arena (Fort Bragg)**

- Closed.

In 2026, the season opens April 16 for all salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). Gear restrictions same as in 2022 (C.2, C.3). Harvest guidelines and vessel-based landing and possession limits will be considered inseason (C.8.f). Inseason action to close fisheries, modify season dates, or modify vessel-based landing and possession limits may be considered when total commercial harvest in this management area is approaching its harvest guideline (C.8). Electronic Fish Tickets must be submitted within 24 hours of landing (C.12). This opening could be modified following Council review at its March and/or April 2026 meeting.

**Point Arena to Pigeon Pt. (San Francisco)**

- Closed.

In 2026, the season opens May 1 for all salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). Gear restrictions same as in 2022 (C.2, C.3). Harvest guidelines and vessel-based landing and possession limits will be considered inseason (C.8.f). Inseason action to close fisheries, modify season dates, or modify vessel-based landing and possession limits may be considered when total commercial harvest in this management area is approaching its harvest guideline (C.8). Electronic Fish Tickets must be submitted within 24 hours of landing (C.12). This opening could be modified following Council review at its March and/or April 2026 meeting.

**Pigeon Point to U.S./Mexico Border (Monterey)**

- Closed.

In 2026, the season opens May 1 for all salmon except coho (C.4, C.7). Chinook minimum size limit of 27 inches total length (B, C.1). Gear restrictions same as in 2022 (C.2, C.3). Harvest guidelines and vessel-based landing and possession limits will be considered inseason (C.8.f). Inseason action to close fisheries, modify season dates, or modify vessel-based landing and possession limits may be considered when total commercial harvest in this management area is approaching its harvest guideline (C.8). Electronic Fish Tickets must be submitted within 24 hours of landing (C.12). This opening could be modified following Council review at its March and/or April 2026 meeting.

When the fishery is closed from Humbug Mountain to the OR/CA Border 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).

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).

TABLE V-1. 2025 Commercial troll management measures for non-Indian ocean salmon fisheries–Council adopted. (Page 4 of 6)

**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 | 27 | 20.5 | 16 | 12 | None |
| Cape Falcon to Humbug Mt. | 28 | 21.5 | 16 | 12 | None |
| Humbug Mt. to OR/CA Border | 28 | 21.5 | - | - | None |
| OR/CA Border to Humboldt South Jetty | - | - | - | - | - |
| Latitude 40°10' N. to Pt. Arena | - | - | - | - | - |
| Pt. Arena to Pigeon Pt. | - | - | - | - | - |
| Pigeon Pt. to U.S./Mexico Border | - | - | - | - | - |

**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 90º angle.

C.4. Vessel Operation in Closed Areas with Salmon on Board:

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

C.5. Control Zone Definitions:

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

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

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) (o) (12)-(62), when in place.

| | | |
|---|---|---|
| 45°46.00′ N. lat., 124°04.49′ W. long.; | 44°44.96′ N. lat., 124°14.39′ W. long.; | 43°40.49′ N. lat., 124°15.74′ W. long.; |
| 45°44.34′ N. lat., 124°05.09′ W. long.; | 44°43.44′ N. lat., 124°14.78′ W. long.; | 43°38.77′ N. lat., 124°15.64′ W. long.; |
| 45°40.64′ N. lat., 124°04.90′ W. long.; | 44°42.26′ N. lat., 124°13.81′ W. long.; | 43°34.52′ N. lat., 124°16.73′ W. long.; |
| 45°33.00′ N. lat., 124°04.46′ W. long.; | 44°41.68′ N. lat., 124°15.38′ W. long.; | 43°28.82′ N. lat., 124°19.52′ W. long.; |
| 45°32.27′ N. lat., 124°04.74′ W. long.; | 44°34.87′ N. lat., 124°15.80′ W. long.; | 43°23.91′ N. lat., 124°24.28′ W. long.; |
| 45°29.26′ N. lat., 124°04.22′ W. long.; | 44°33.74′ N. lat., 124°14.44′ W. long.; | 43°20.83′ N. lat., 124°26.63′ W. long.; |
| 45°20.25′ N. lat., 124°04.67′ W. long.; | 44°27.66′ N. lat., 124°16.99′ W. long.; | 43°17.96′ N. lat., 124°28.81′ W. long.; |
| 45°19.99′ N. lat., 124°04.62′ W. long.; | 44°19.13′ N. lat., 124°19.22′ W. long.; | 43°16.75′ N. lat., 124°28.42′ W. long.; |
| 45°17.50′ N. lat., 124°04.91′ W. long.; | 44°15.35′ N. lat., 124°17.38′ W. long.; | 43°13.97′ N. lat., 124°31.99′ W. long.; |
| 45°11.29′ N. lat., 124°05.20′ W. long.; | 44°14.38′ N. lat., 124°17.78′ W. long.; | 43°13.72′ N. lat., 124°33.25′ W. long.; |
| 45°05.80′ N. lat., 124°05.40′ W. long.; | 44°12.80′ N. lat., 124°17.18′ W. long.; | 43°12.26′ N. lat., 124°34.16′ W. long.; |
| 45°05.08′ N. lat., 124°05.93′ W. long.; | 44°09.23′ N. lat., 124°15.96′ W. long.; | 43°10.96′ N. lat., 124°32.33′ W. long.; |
| 45°03.83′ N. lat., 124°06.47′ W. long.; | 44°08.38′ N. lat., 124°16.79′ W. long.; | 43°05.65′ N. lat., 124°31.52′ W. long.; |
| 45°01.70′ N. lat., 124°06.53′ W. long.; | 44°08.30′ N. lat., 124°16.75′ W. long.; | 42°59.66′ N. lat., 124°32.58′ W. long |
| 44°58.75′ N. lat., 124°07.14′ W. long.; | 44°01.18′ N. lat., 124°15.42′ W. long.; | 42°54.97′ N. lat., 124°36.99′ W. long |
| 44°51.28′ N. lat., 124°10.21′ W. long.; | 43°51.61′ N. lat., 124°14.68′ W. long.; | 42°53.81′ N. lat., 124°38.57′ W. long.; |
| 44°49.49′ N. lat., 124°10.90′ W. long.; | 43°42.66′ N. lat., 124°15.46′ W. long.; | 42°50.00′ N. lat., 124°39.68′ 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.7. Incidental Pacific Halibut Harvest: License applications for incidental harvest for Pacific halibut during commercial salmon fishing must be obtained from NMFS.

a. Pacific halibut retained must be no less than 32 inches (81.3 cm) in total length, measured from the tip of the lower jaw with the mouth closed to the extreme end of the middle of the tail, and must be landed with the head on.

b. During the salmon troll season, incidental harvest is allowed if quota is available. WDFW, ODFW, and CDFW will monitor landings. NMFS may make inseason adjustments to the landing restrictions to assure that the incidental harvest rate is appropriate for salmon and halibut availability, does not encourage target fishing on halibut, and does not increase the likelihood of exceeding the quota for this fishery, and may prohibit retention of halibut in the non-tribal salmon troll fishery if there is risk in exceeding the subquota for the salmon troll fishery or the non-tribal commercial fishery allocation. Inseason adjustments will be announced on the NMFS hotline (phone: 1-800-662-9825 or 206-526-6667). See the most current Pacific Halibut Catch Sharing Plan for more details.

c. Incidental Pacific halibut catch regulations in the commercial salmon troll fishery adopted for 2025, prior to any 2025 inseason action, will be in effect when incidental Pacific halibut retention opens on April 1, 2026 unless otherwise modified by inseason action at the March 2026 Council meeting.

d. Beginning May 16, 2025, through the end of the 2025 salmon troll fishery, and beginning April 1, 2026, until modified through inseason action or superseded by the 2026 management measures license holders may land or possess no more than one Pacific halibut per two Chinook, except one Pacific halibut may be possessed or landed without meeting the ratio requirement, and no more than 35 halibut may be possessed or landed per trip.

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

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. The Council will consider inseason recommendations for special regulations for any experimental fisheries annually in March; proposals must meet Council protocol and be received in November the year prior.
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. Deviations from the allocation of allowable ocean harvest of coho salmon in the area south of Cape Falcon may be allowed to meet consultation standards for ESA-listed stocks (FMP 5.3.2). Therefore, if fisheries are constrained to meet ESA-conservation objectives as described in the preamble to the rule, then any rollovers resulting in a deviation from the south of Cape Falcon coho allocation schedule would fall underneath this exemption.

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.

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 Latitude 40°10' N.

C.11. Latitudes for geographical reference of major landmarks along the west coast. Data source: 2024 West Coast federal salmon regulations, Chapter 5.
https://www.federalregister.gov/documents/2024/05/21/2024-11046/fisheries-off-west-coast-states-west-coast-salmon-fisheries-2024-specifications-and-management

| | | | |
|---|---|---|---|
| U.S. / Canada border | 49°00′00″ N lat. | Humboldt South Jetty, CA | 40°45′53″ N lat. |
| Cape Flattery, WA | 48°23′00″ N lat. | 40°10′ line (near Cape Mendocino, CA) | 40°10′00″ 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. |
| South end Heceta Bank line, OR | 43°58′00″ N lat. | Pigeon Point, CA | 37°11′00″ N lat. |
| Humbug Mountain, OR | 42°40′30″ N lat. | Point Sur, CA | 36°18′00″ N lat. |
| Oregon-California border | 42°00′00″ N lat. | Point Conception, CA | 34°27′00″ N lat. |

C.12. California 24-hour reporting requirements: Salmon harvested under quota or harvest limit regulations must be reported within 24-hours of landing via electronic fish tickets. Electronic fish tickets shall be completed at the time of the receipt, purchase, or transfer of fish, whichever occurs first, and shall contain the number of salmon landed. Once transfer of fish begins, all fish aboard the vessel are counted as part of the landing. The electronic fish ticket is a web-based form submitted through the "E-Tix" application, managed by the Pacific States Marine Fisheries Commission (PSMFC) and located at https://etix.psmfc.org

TABLE V-2. 2025 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** |
| 1. Overall non-Indian TAC: 115,000 Chinook and 108,000 coho marked with a healed adipose fin clip (marked).<br>2. Trade: Commercial troll traded 9,000 marked coho to the recreational fishery for 2,250 Chinook.<br>3. Recreational TAC: 53,750 Chinook and 99,720 marked coho; all retained coho must be marked with a healed adipose fin clip.<br>4. Buoy 10 fishery opens August 1 with an expected landed catch of 30,000 marked coho in August and September. |
| **U.S./Canada Border to Cape Alava (Neah Bay Subarea**)<br>• June 21 through the earlier of September 15, with a subarea guideline of 12,600 Chinook (C.5).<br><br>Open seven days per week, June 21-July 3, all salmon except coho, one salmon per day. Chinook minimum size limit of 24 inches total length (B).<br><br>Beginning July 4, open seven days per week, all salmon, with a 10,370 marked coho subarea quota, two salmon per day. No chum retention beginning August 1. All coho must be marked with a healed adipose fin clip (C.1). Chinook minimum size limit of 24 inches total length (B).<br><br>See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5).<br><br>Beginning August 1, Chinook non-retention east of the Bonilla-Tatoosh line during Council managed ocean fishery (C.4.a). |
| **Cape Alava to Queets River (La Push Subarea**)<br>• June 21 through the earlier of September 15, with a subarea guideline of 2,280 Chinook (C.5).<br><br>Open seven days per week, June 21-July 3, all salmon except coho, one salmon per day. Chinook minimum size limit of 24 inches total length (B).<br><br>Beginning July 4, open seven days per week, all salmon, with a 2,590 marked coho subarea quota, two salmon per day. No chum retention beginning August 1. All coho must be marked with a healed adipose fin clip (C.1). Chinook minimum size limit of 24 inches total length (B).<br><br>See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5). |
| **Queets River to Leadbetter Point (Westport Subarea)**<br>• June 21 through the earlier of September 15, with a subarea guideline of 22,270 Chinook (C.5).<br><br>Open seven days per week, June 21-28, all salmon except coho, one salmon per day. Chinook minimum size limit of 22 inches total length (B).<br><br>Beginning June 29, open seven days per week, all salmon, with a 36,900 marked coho subarea quota, 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). Chinook minimum size limit of 22 inches total length (B).<br><br>See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5). |
| **Leadbetter Point to Cape Falcon (Columbia River Subarea)**<br>• June 25 through the earlier of September 30, or 49,860 marked coho subarea quota, with a subarea guideline of 16,600 Chinook (C.5).<br><br>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. Chinook minimum size limit of 22 inches total length (B).<br><br>Prior to June 25, possession of salmon on board a vessel is prohibited on days when the subarea is closed to salmon retention.<br><br>Columbia Control Zone closed (C.4.b). See gear restrictions and definitions (C.2, C.3). Inseason management may be used to sustain season length and keep harvest within the overall Chinook and coho recreational TACs for north of Cape Falcon (C.5). |

TABLE V-2. 2025 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 2 of 6)

**South of Cape Falcon**

**Supplemental Management Information**

1. Sacramento River fall Chinook spawning escapement of 147,733 hatchery and natural area adults.
2. Sacramento Index exploitation rate of 10.8%.
3. Sacramento River fall Chinook river recreational impacts: 8,000.
4. Klamath River recreational fishery allocation: 978 adult Klamath River fall Chinook.
5. Klamath tribal allocation: 1,385 adult Klamath River fall Chinook.
6. Overall recreational coho TAC: 44,000 coho marked with a healed adipose fin clip (marked), and 30,000 coho in the non-mark-selective coho fishery.

Fisheries may need to be adjusted to meet NMFS ESA consultation standards, FMP requirements, other management objectives, or upon receipt of new allocation recommendations from the CFGC.

**A. SEASON DESCRIPTIONS**

**South of Cape Falcon**

**Cape Falcon to Humbug Mt.**

- *March 15-May 15. See 2024 management measures, and 2025 inseason actions. Dates may be subject to further inseason action.*
- May 16-July 15;
- September 1-October 31 (C.6).

Open seven days per week. All salmon except coho, except during the mark-selective coho fishery and the non-mark-selective coho fishery as described below (C.5), two salmon per day (C.1). Starting June 7, two salmon limit, of which only one may be a Chinook (C.1). After September 30 or attainment of the non-mark-selective coho quota, all salmon except coho, one salmon per day. Chinook minimum size limit of 24 inches total length, coho minimum size limit of 16 inches total length (B, C.1). See gear restrictions and definitions (C.2, C.3).

Non-mark-selective coho fishery:

- September 1 through the earlier of September 30, or a 30,000 non-mark-selective coho quota (C.6). Open days may be modified inseason (C.5).

Beginning October 1, the fishery is only open shoreward of the 40-fathom management line (C.4.e).

**Cape Falcon to OR/CA Border**

Mark-selective coho fishery:

- June 7 through the earlier of August 24, or 44,000 marked coho quota (C.6).

Open seven days per week, two salmon per day (C.1). When Chinook retention is allowed, only one may be a Chinook (C.1). All retained coho must be marked with a healed adipose fin clip (C.1). Chinook minimum size limit of 24 inches total length, coho minimum size limit of 16 inches total length (B, C.1). See gear restrictions and definitions (C.2, C.3).

Any remainder of the mark-selective coho quota may be transferred inseason on an impact neutral basis to the September non-mark-selective coho fishery from Cape Falcon to Humbug Mountain (C.5).

In 2026, the season will open March 15 for all salmon except coho, two salmon per day (C.1). Chinook minimum size limit of 24 inches total length (B, C.1); and the same gear restrictions as in 2025 (C.2, C.3). This opening could be modified following Council review at its March 2026 meeting.

**Humbug Mt. to OR/CA Border**

May 16-June 6;
June 30-July 15 (C.6).

Open seven days per week. All salmon except coho, except during the mark-selective coho fishery (C.5). From May 16-June 6, two salmon per day (C.1). From June 30-July 15, two salmon per day, of which only one may be Chinook (C.1). Chinook minimum size limit 24 inches total length (B, C.1). See gear restrictions and definitions (C.2, C.3).

**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.c).

TABLE V-2. 2025 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 3 of 6)

**A. SEASON DESCRIPTIONS**

**OR/CA Border to latitude 40°10' N. (California KMZ)**

- June 7-8;
- July 5-6;
- July 31-August 3;
- August 25-31 (C.6).

Inseason action may be taken to close open days when total harvest is approaching a statewide harvest guideline of 7,000 Chinook.

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).

Klamath Control Zone closed in August (C.4.d). See California State regulations for additional closures adjacent to the Smith, Eel, and Klamath Rivers.

In 2026, the 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 2025 (C.2, C.3). Harvest guidelines and bag limits may be considered inseason (C.5). Inseason action to close fisheries, modify season dates, or modify the bag limit may be considered when sport harvest is approaching a harvest guideline. This opening could be modified following Council review at its March and/or April 2026 meeting.

**Latitude 40°10' N. to Point Arena (Fort Bragg)**

- June 7-8;
- July 5-6;
- July 31-August 3;
- August 25-31 (C.6).

Inseason action may be taken to close open days when total harvest is approaching a statewide harvest guideline of 7,000 Chinook.

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).

In 2026, season opens April 4 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 2025 (C.2, C.3). Harvest guidelines and bag limits may be considered inseason (C.5). Inseason action to close fisheries, modify season dates, or modify the bag limit may be considered when sport harvest is approaching a harvest guideline. This opening could be modified following Council review at its March 2026 meeting.

**Point Arena to Pigeon Point (San Francisco)**

- June 7-8;
- July 5-6;
- July 31-August 3;
- August 25-31 (C.6).

Inseason action may be taken to close open days when total harvest is approaching a statewide harvest guideline of 7,000 Chinook.

Point Reyes to Pigeon Point Subarea

- September 4-7, 29-30;
- October 1-5, 27-31 (C.6).

Inseason action may be taken to close open days when total harvest is approaching a statewide harvest guideline of 7,500 Chinook, **applicable to the September and October open dates between Point Reyes and Point Sur.**

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).

In 2026, season opens April 4 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 2025 (C.2, C.3). Harvest guidelines and bag limits may be considered inseason (C.5). Inseason action to close fisheries, modify season dates, or modify the bag limit may be considered when sport harvest is approaching a harvest guideline. This opening could be modified following Council review at its March 2026 meeting.

TABLE V-2. 2025 Recreational management measures for non-Indian ocean salmon fisheries - Council adopted. (Page 4 of 6)

**A. SEASON DESCRIPTIONS**

**Pigeon Point to U.S./Mexico Border (Monterey)**

- June 7-8;
- July 5-6;
- July 31-August 3;
- August 25-31 (C.6).

Inseason action may be taken to close open days when total harvest is approaching a statewide harvest guideline of 7,000 Chinook.

Pigeon Point to Point Sur Subarea

- September 4-7, 29-30 (C.6).

Inseason action may be taken to close open days when total harvest is approaching a statewide harvest guideline of 7,500 Chinook, **applicable to the September and October open dates between Point Reyes and Point Sur.**

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).

In 2026, season opens April 4 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 2025 (C.2, C.3). Harvest guidelines and bag limits may be considered inseason (C.5). Inseason action to close fisheries, modify season dates, or modify the bag limit may be considered when sport harvest is approaching a harvest guideline. This opening could be modified following Council review at its March 2026 meeting.

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).

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

| Area (when open) | Chinook | Coho | Pink |
|---|---|---|---|
| North of Cape Falcon (Neah Bay and La Push) | 24 | 16 | none |
| North of Cape Falcon (Westport and Col R.) | 22 | 16 | none |
| Cape Falcon to Humbug Mt. | 24 | 16 | none |
| Humbug Mt. to OR/CA Border | 24 | 16 | none |
| OR/CA Border to Latitude 40°10' N. | 20 | - | 20 |
| Latitude 40°10' N. to Point Arena | 20 | - | 20 |
| Pt. Arena to Pigeon Pt. | 20 | - | 20 |
| Pigeon Pt. to U.S./Mexico Border | 20 | - | 20 |

**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, or salmon heads removed 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. *Latitude 40°10' N. 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. *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.

c. *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.

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

e. Waypoints for the 40 fathom regulatory line from Cape Falcon to Humbug Mt. (50 CFR 660.71 (o) (12)-(62), when in place.

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

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

a. Actions could include modifications to bag limits, or days open to fishing, and extensions or reductions in areas open to fishing.

b. Coho may be transferred inseason among recreational subareas north of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Council's Salmon Advisory Subpanel (SAS) recreational representatives north of Cape Falcon, and 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 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 OR/CA Border. A 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. Deviations from the allocation of allowable ocean harvest of coho salmon in the area south of Cape Falcon may be allowed to meet consultation standards for ESA-listed stocks (FMP 5.3.2). Therefore, any rollovers resulting in a deviation from the south of Cape Falcon coho allocation schedule would fall underneath this exemption.

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.

C.7. Vessel Operation in Closed Areas with Salmon on Board:

a. Except as provided under C.7.b and C.7.c below, it is unlawful for a vessel to fish 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 prohibited salmon are in possession.

b. It is unlawful to possess a salmon species within the Oregon KMZ when the fishing for that salmon species is prohibited within the Oregon KMZ regardless of where taken.

c. It is unlawful to possess a salmon species within the California KMZ when the fishing for that salmon species is prohibited within the California KMZ regardless of where taken.

TABLE V-3. 2025 Treaty Indian ocean troll management measures for ocean salmon fisheries - Council adopted. (Page 1 of 2)

| A. SEASON ALTERNATIVE DESCRIPTIONS |
|---|
| **Supplemental Management Information** |
| 1. Overall Treaty-Indian TAC: 45,000 Chinook and 37,500 coho.<br>2. In 2026, the season will open May 1, consistent with all preseason regulations in place for Treaty Indian Troll fisheries during May 16-June 30, 2025. All catch in May 2026 applies against the 2026 Treaty Indian Troll fisheries quota. This opening could be modified following Council review at its March and/or April 2026 meetings. |
| • May 1 through the earlier of June 30 or 22,500 Chinook quota.<br><br>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).<br><br>• July 1 through the earlier of a date in September, to be established in tribal regulations, or 22,500 Chinook quota or 37,500 coho quota are obtained.<br><br>All salmon. See size limit (B) and other restrictions (C). |

**B. MINIMUM LENGTH (TOTAL INCHES)**

| | Chinook | | Coho | | |
|---|---|---|---|---|---|
| Area (when open) | Total Length | Head-off | Total Length | Head-off | Pink |
| 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 a date in September or when quotas are obtained.
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 2024 season (estimated harvest during the October ceremonial and subsistence fishery: 20 Chinook; 40 coho).
c. The treaty troll tribes may conduct an experimental fishery through the month of September for gathering genetic stock identification (GSI) data to inform the treaty troll fishery in future years. Impacts from this non-retention fishery are accounted for in the modeling associated with the treaty troll fishery.

TABLE V-3. 2025 Treaty Indian troll management Alternatives for ocean salmon fisheries – Council adopted. (Page 2 of 2)

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 V-4. 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 forecast 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 *at risk of* approaching an overfished condition or experiencing overfishing are indicated in **bold**. 2026 spawning escapement and exploitation rate estimates are based on preliminary 2026 preseason abundance forecasts and 2025 Council regulations.

| | Estimated Adult Spawning Escapement | | | | | | | | | Total Exploitation Rate | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2021 | 2022 | 2023 | 2024 | 2025[a/] | Forecast 2026[b/] | 3-yr Geo Mean | MSST | $S_{MSY}$ | 2021 | 2022 | 2023 | 2024[a/] | 2025[a/] | 2026[b/] | MFMT |
| **Chinook** | | | | | | | | | | | | | | | | |
| Sacramento Fall | 105,584 | 61,864 | 133,662 | 100,152 | 164,763 | 353,389 | 179,994 | 91,500 | 122,000 | 0.68 | 0.76 | 0.04 | 0.05 | 0.07 | 0.10 | 0.58[g/] |
| Klamath River Fall | 29,942 | 21,956 | 41,370 | 24,032 | 39,869 | 37,730 | 33,065 | 30,525 | 40,700 | 0.38 | 0.46 | 0.04 | 0.23 | 0.09 | 0.06 | 0.71 |
| Southern Oregon[c/] | 48,979 | 17,609 | 29,555 | 53,342 | 76,687 | NA | 49,447 | 20,500 | 34,992 | NA | NA | NA | NA | NA | NA | 0.54 |
| Central and Northern OR[d/] | 85 | 105 | 118 | 123 | 142 | NA | 127 | 30 fish/mi | 60 fish/mi | 0.45 | 0.46 | 0.41 | NA | NA | NA | 0.78 |
| Upper River Bright - Fall[d/] | 86,644 | 53,961 | 64,450 | 57,580 | 38,347 | NA | 52,209 | 19,812 | 39,625 | 0.45 | 0.43 | 0.31 | NA | NA | NA | 0.86 |
| Upper River - Summer[d/] | 52,076 | 64,497 | 49,410 | 41,142 | 38,288 | NA | 42,696 | 6,071 | 12,143 | 0.38 | 0.51 | 0.33 | NA | NA | NA | 0.75 |
| Willapa Bay - Fall[e/] | 2,966 | 2,351 | 2,095 | 3,393 | NA | NA | 2,557 | 1,697 | 3,393 | 0.71 | 0.62 | 0.65 | NA | NA | NA | 0.78 |
| Grays Harbor Fall[d/e/] | 13,207 | 14,259 | 10,943 | 11,517 | NA | NA | 12,158 | 6,663 | 13,326 | **0.68** | 0.60 | 0.62 | NA | NA | NA | 0.63 |
| Grays Harbor Spring | 2,573 | 1,348 | 2,175 | 1,775 | NA | NA | 1,733 | 700 | 1,400 | NA | NA | NA | NA | NA | NA | 0.78 |
| Queets - Fall[d/] | 3,364 | 1,784 | 2,246 | 4,273 | NA | NA | 2,577 | 1,250 | 2,500 | 0.76 | 0.80 | 0.73 | NA | NA | NA | 0.87 |
| Queets - Sp/Su | 280 | 434 | 540 | 756 | NA | NA | 562 | 350 | 700 | NA | NA | NA | NA | NA | NA | 0.78 |
| Hoh - Fall[d/e/] | 2,622 | 1,866 | 2,323 | 2,158 | NA | NA | 2,107 | 600 | 1,200 | 0.74 | 0.64 | 0.71 | NA | NA | NA | 0.90 |
| Hoh Sp/Su | 817 | 1,055 | 980 | 1,835 | NA | NA | 1,238 | 450 | 900 | NA | NA | NA | NA | NA | NA | 0.78 |
| Quillayute - Fall[d/e/] | 5,568 | 8,369 | 6,682 | 5,724 | 6,668 | NA | 6,342 | 1,500 | 3,000 | 0.69 | 0.60 | 0.70 | NA | NA | NA | 0.87 |
| Quillayute - Sp/Su | 1,082 | 1,574 | 2,087 | 1,129 | 1,984 | NA | 1,672 | 600 | 1,200 | NA | NA | NA | NA | NA | NA | 0.78 |
| Hoko -Su/Fa[d/] | 1,165 | 1,386 | 4,393 | 3,134 | NA | NA | 2,672 | 425 | 850 | 0.13 | 0.28 | 0.20 | NA | NA | NA | 0.78 |
| **Coho** | | | | | | | | | | | | | | | | |
| Willapa Bay[f/] | 31,369 | 24,197 | 18,693 | 19,651 | NA | 14,264 | 17,369 | 8,600 | 17,200 | 0.24 | 0.31 | 0.27 | 0.28 | NA | 0.60 | 0.74 |
| Grays Harbor[f/] | 62,789 | 61,057 | 48,217 | 47,008 | NA | 41,822 | 45,596 | 18,320 | 24,426 | 0.23 | 0.29 | 0.26 | 0.34 | NA | 0.48 | 0.65 |
| Queets | 5,752 | 12,083 | 4,375 | 7,865 | NA | 6,851 | 6,177 | 4,350 | 5,800 | 0.10 | 0.32 | 0.41 | 0.20 | NA | 0.35 | 0.65 |
| Hoh | 6,396 | 8,224 | 3,879 | 6,085 | NA | 3,517 | 4,362 | 1,890 | 2,520 | 0.18 | 0.30 | 0.41 | 0.19 | NA | 0.46 | 0.65 |
| Quillayute Fall | 9,938 | 16,643 | 7,958 | 6,804 | NA | 9,222 | 7,933 | 4,725 | 6,300 | 0.04 | 0.22 | 0.29 | 0.23 | NA | 0.29 | 0.59 |
| Juan de Fuca | 20,837 | 16,977 | 13,887 | 13,095 | NA | 8,827 | 11,709 | 7,000 | 11,000 | 0.07 | 0.08 | 0.07 | 0.09 | NA | 0.10 | 0.60 |
| Hood Canal | 34,388 | 9,192 | 32,934 | 59,048 | NA | 13,675 | 29,849 | 10,750 | 14,350 | 0.25 | 0.54 | 0.34 | 0.32 | NA | 0.35 | 0.65 |
| Skagit | 75,532 | 92,306 | 54,443 | 89,463 | NA | 93,809 | 77,021 | 14,857 | 25,000 | 0.33 | 0.26 | 0.27 | 0.33 | NA | 0.42 | 0.60 |
| Stillaguamish | 38,176 | 53,828 | 37,962 | 38,342 | NA | 26,185 | 33,653 | 6,100 | 10,000 | 0.11 | 0.10 | 0.18 | 0.20 | NA | 0.31 | 0.50 |
| Snohomish | 97,523 | 85,692 | 63,042 | 76,630 | NA | 48,892 | 61,814 | 31,000 | 50,000 | 0.11 | 0.08 | 0.21 | 0.20 | NA | 0.36 | 0.60 |

a/ Preliminary.

b/ Preliminary approximations based on preseason forecasts and the previous year fishing regulations.

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

d/ CWT based exploitation rates from PSC-CTC 2025 Exploitation Rate Analysis (TCCHINOOK (26)-01).

e/ Queets River fall Chinook coded-wire-tag (CWT) exploitation rates used as a proxy. Adjustments made to terminal fishery impacts to account for differential harvest rates.

f/ Willapa Bay and Grays Harbor coho escapement and exploitation rate estimates based on natural area adult spawners.

g/ Sacramento Fall MFMT updated for use starting in 2025. Prior to 2025, MFMT of 0.78 was in place.

TABLE V-5. Postseason $S_{ACL}$, $S_{OFL}$, and spawner escapement estimates for Sacramento River fall Chinook (SRFC), Klamath River fall Chinook (KRFC) and Willapa Bay coho. For the current year, $S_{ACL}$ and $S_{OFL}$ are preseason values. Current year spawner escapements are preseason values based on current abundance forecasts and the previous year fishing regulations. **Bolded** values indicate instances where the escapement is lower than the $S_{ACL}$ and/or the $S_{OFL}$.

| | SRFC | | | KRFC | | | Willapa Bay Coho | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | $S_{ACL}$ a/ | $S_{OFL}$ | Escapement b/ | $S_{ACL}$ a/ | $S_{OFL}$ | Escapement c/ | $S_{ACL}$ a/ | $S_{OFL}$ | Escapement c/ |
| 2012 | 188,378 | 138,144 | 285,429 | 70,922 | 64,273 | 121,543 | -- | -- | -- |
| 2013 | 260,798 | 191,251 | 406,846 | 52,032 | 47,154 | 59,156 | -- | -- | -- |
| 2014 | 165,355 | 121,260 | 212,476 | 47,674 | 43,205 | 95,104 | -- | -- | -- |
| 2015 | 76,485 | 56,089 | 113,468 | 22,202 | 20,120 | 28,112 | 9,440 | 8,181 | 17,086 |
| 2016 | 61,595 | 45,170 | 89,699 | 7,056 | 6,394 | 13,937 | 14,839 | 12,860 | 30,667 |
| 2017 | 41,119 | 30,154 | 44,329 | 7,113 | 6,446 | 19,904 | 5,180 | 4,489 | 11,379 |
| 2018 | 66,110 | 48,481 | 105,466 | 24,468 | 22,174 | 52,352 | 7,903 | 6,849 | 17,228 |
| 2019 | 152,115 | 111,551 | 163,767 | 11,314 | 10,253 | 20,022 | 7,458 | 6,464 | 15,115 |
| 2020 | 105,737 | 77,541 | 138,091 | 12,013 | 10,887 | 26,185 | 7,399 | 6,413 | 16,476 |
| 2021 | 97,137 | 71,234 | 105,584 | 15,608 | 14,144 | 29,942 | 12,432 | 10,774 | 31,369 |
| 2022 | **75,825** | 55,605 | **61,864** | 13,066 | 11,841 | 21,956 | 10,505 | 9,105 | 24,197 |
| 2023 | 41,806 | 30,657 | 133,662 | 13,732 | 12,445 | 41,370 | 7,640 | 6,621 | 18,693 |
| 2024 | 31,670 | 23,225 | 100,152 | 9,996 | 9,059 | 24,032 | 8,199 | 7,106 | 19,651 |
| 2025 | 84,680 | 74,095 | 164,763 | 13,958 | 12,649 | 39,869 | NA | NA | NA |
| 2026 | 188,328 | 164,787 | 353,389 | 12,861 | 11,655 | 37,730 | 10,546 | 9,140 | 14,264 |

a/ $S_{ACL} = S_{ABC}$.

b/ Hatchery and natural area adult spawners.

c/ Natural area adult spawners.

TABLE V-6. Comparison of projected ocean escapements and exploitation rates for critical natural and Columbia River hatchery coho stocks (thousands of fish) resulting from application of 2025 Council-adopted regulations to 2025 and 2026 ocean abundance forecasts[a/]

| | Ocean Escapement and ER Estimates Under 2025 Regulations[b/] | | | | |
|---|---|---|---|---|---|
| | 2025 Abundance Forecasts | | 2026 Abundance Forecasts | | |
| Stock | Ocean Escapement | Exploitation Rate | Ocean Escapement | Exploitation Rate | 2026 FMP Conservation Objective[c/] |
| **Natural Coho Stocks** | | | | | |
| Skagit | 63.0 | 44.1% | 152.3 | 41.5% | Exploitation Rate ≤60.0%[d/] |
| Stillaguamish | 26.5 | 25.7% | 36.7 | 31.1% | Exploitation Rate ≤50.0%[d/] |
| Snohomish | 56.9 | 31.6% | 73.4 | 35.6% | Exploitation Rate ≤40.0%[d/] |
| Hood Canal | 18.7 | 35.7% | 19.7 | 34.8% | Exploitation Rate ≤45.0%[d/] |
| Strait of Juan de Fuca | 13.3 | 10.4% | 9.3 | 9.9% | Exploitation Rate ≤20.0%[d/] |
| Quillayute Fall | 10.3 | 29.0% | 12.3 | 28.7% | 6.3 - 15.8 Spawners |
| Hoh | 4.6 | 46.5% | 5.6 | 46.0% | 2.0 - 5.0 Spawners |
| Queets | 7.6 | 35.6% | 8.9 | 34.9% | 5.8 - 14.5 Spawners |
| Grays Harbor[f/] | 64.4 | 48.7% | 74.2 | 48.5% | 35.4 Spawners |
| LCN | 60.5 | 21.5% | 85.9 | 21.6% | Exploitation Rate ≤23.0[e/] |
| OCN | 217.5 | 25.1% | 155.1 | 29.4% | Exploitation Rate ≤30.0%[e/] |
| SONCC | | | | | |
| Trinity Natural | -- | 15.2% | -- | 15.2% | Exploitation Rate ≤16.0%[e/] |
| Klamath Natural | -- | 7.5% | -- | 7.5% | Exploitation Rate ≤15.0%[e/] |
| Rogue Natural | -- | 6.5% | -- | 6.6% | Exploitation Rate ≤15.0%[e/] |
| Other Natural | -- | 1.6% | -- | 1.6% | Exploitation Rate ≤15.0%[e/] |
| **Hatchery Coho Stocks** | | | | | |
| Columbia Early | 224.3 | 51.0% | 217.7 | 49.3% | 6.2 Hatchery Escapement |
| Columbia Late | 83.5 | 52.8% | 118.1 | 49.5% | 14.2 Hatchery Escapement |

a/ Quota levels include harvest and hooking mortality estimates used in planning the Council's 2025 ocean fisheries and a coho catch for the Canadian troll fishery off the West Coast of Vancouver Island (WCVI).

b/ 2025 preseason regulations with the following coho quotas: U.S. Canada Border to Cape Falcon: Treaty Indian troll-37,500; non-Indian troll-8,280 selective; recreational--99,720 selective; Cape Falcon to OR/CA border: recreational-44,000 selective; Cape Falcon to Humbug Mountain: recreational-30,000 non-selective; troll-7,500 non-selective. Ocean escapement is generally the estimated number of coho escaping ocean fisheries and entering freshwater. For Puget Sound stocks, ocean escapement is the total abundance minus ocean fisheries (ie outside Puget Sound). For the OCN coho stock, this value represents the estimated spawner escapement in SRS accounting. For Columbia R. hatchery and LCN stocks, ocean escapement represents the number of coho after the Buoy 10 fishery; the LCN exploitation rates shown are total marine and mainstem Columbia R. fishery ERs.

c/ Goals represent FMP conservation objectives, ESA consultation standards, or hatchery escapement needs. Spawning escapement goals are not directly comparable to ocean escapement because the latter occur before inside fisheries.

d/ Assumed exploitation rate based on preliminary abundance forecasts.
e/ Pending confirmation of 2026 ESA consultation standard.
f/ Grays Harbor escapements and exploitation rate estimates based on natural area adult spawners.

TABLE V-7. Comparison of Lower Columbia natural (LCN), Oregon coastal natural (OCN), and Southern Oregon/Northern California Coastal (SONCC) coho projected harvest mortality and exploitation rates by fishery under Council-adopted 2025 regulations and preliminary 2026 preseason abundance estimates.

| | Projected Harvest Mortality and Exploitation Rate | | | | Exploitation Rate | | | |
|---|---|---|---|---|---|---|---|---|
| | LCN | | OCN | | SONCC Natural | | | |
| Fishery | Number | Percent | Number | Percent | Trinity | Klamath | Rogue | Other |
| **SOUTHEAST ALASKA** | 0 | 0.0% | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **BRITISH COLUMBIA** | 238 | 0.2% | 1,491 | 0.7% | 0.1% | 0.1% | 0.1% | 0.1% |
| **PUGET SOUND/STRAITS** | 221 | 0.2% | 59 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **NORTH OF CAPE FALCON** | | | | | | | | |
| Recreational | 5,836 | 5.7% | 2,215 | 1.0% | 0.1% | 0.1% | 0.1% | 0.1% |
| Treaty Indian Troll | 1,703 | 1.7% | 857 | 0.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| Non-Indian Troll | 984 | 1.0% | 526 | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% |
| **SOUTH OF CAPE FALCON** | | | | | | | | |
| Recreational: | | | | | | | | |
| Cape Falcon to Humbug Mt. | 4,328 | 4.2% | 27,042 | 12.3% | 0.6% | 0.6% | 0.6% | 0.6% |
| Humbug Mt. to Latitude 40°10' N. (KMZ) | 69 | 0.1% | 646 | 0.3% | 0.6% | 0.6% | 0.6% | 0.6% |
| Fort Bragg | 0 | 0.0% | 27 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| South of Pt. Arena | 0 | 0.0% | 26 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Troll: | | | | | | | | |
| Cape Falcon to Humbug Mt. | 900 | 0.9% | 3,092 | 1.4% | 0.2% | 0.2% | 0.2% | 0.2% |
| Humbug Mt. to Latitude 40°10' N. (KMZ) | 0 | 0.0% | 1 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Fort Bragg | 0 | 0.0% | 0 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| South of Pt. Arena | 0 | 0.0% | 30 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **BUOY 10** | 2,233 | 2.2% | 307 | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% |
| **ESTUARY/FRESHWATER** | 5,578 | 5.4% | 28,319 | 12.9% | 13.6% | 5.9% | 4.9% | 0.0% |
| **TOTAL** | 22,090 | 21.6% | 64,638 | 29.4% | 15.2% | 7.5% | 6.6% | 1.6% |

TABLE V-8. Maximum allowable fishery impact rate for OCN coho under Amendment 13 matrix and the revised OCN work group matrix based on parent escapement levels by stock component and marine survival category.[a/]

| | OCN Coho Spawners by Stock Component | | | | Marine Survival Indicator | OCN Work Group Matrix[a/] | | |
|---|---|---|---|---|---|---|---|---|
| Fishery Year (t) | Parent Spawner Year (t-3) | Northern | North-Central | South-Central | Predicted OCN Adult Survival Rate | Marine Survival Category[b/c/] | Parental Spawner Category | Maximum Allowable Impacts |
| 1998 | 1995 | 3,900 | 13,600 | 36,500 | - | Extremely Low | Very Low | ≤8% |
| 1999 | 1996 | 3,300 | 18,100 | 52,600 | - | Low | Critical | 0-8% |
| 2000 | 1997 | 2,100 | 2,800 | 18,400 | - | Low | Critical | 0-8% |
| 2001 | 1998 | 2,600 | 3,300 | 25,900 | - | Medium | Critical | 0-8% |
| 2002 | 1999 | 8,900 | 11,800 | 29,200 | - | Low | Low | ≤15% |
| 2003 | 2000 | 17,900 | 14,300 | 36,500 | - | Med | Low | ≤15% |
| 2004 | 2001 | 33,500 | 25,200 | 112,000 | - | Med | Low | ≤15% |
| 2005 | 2002 | 52,500 | 104,000 | 104,100 | - | Low | High | ≤15% |
| 2006 | 2003 | 59,600 | 68,900 | 99,800 | - | Low | High | ≤15% |
| 2007 | 2004 | 28,800 | 42,100 | 101,900 | - | Med | Med | ≤20% |
| 2008 | 2005 | 16,500 | 51,400 | 86,700 | - | Extremely Low | High | ≤8% |
| 2009 | 2006 | 24,100 | 21,200 | 83,500 | - | Med | Low | ≤15% |
| 2010 | 2007 | 17,500 | 12,300 | 36,500 | - | Low | Low | ≤15% |
| 2011 | 2008 | 25,600 | 68,100 | 86,000 | - | Low | High | ≤15% |
| 2012 | 2009 | 48,100 | 86,400 | 128,200 | - | Low | High | ≤15% |
| 2013 | 2010 | 55,000 | 56,500 | 171,900 | 6.8% | Med | High | ≤30% |
| 2014 | 2011 | 45,900 | 119,100 | 191,300 | 7.1% | Med | High | ≤30% |
| 2015 | 2012 | 7,500 | 33,800 | 57,800 | 7.5% | Med | Low | ≤15% |
| 2016 | 2013 | 11,000 | 39,700 | 73,700 | 6.2% | Med | Med | ≤20% |
| 2017 | 2014 | 67,400 | 121,900 | 170,400 | 5.6% | Med | High | ≤30% |
| 2018 | 2015 | 6,700 | 22,700 | 27,700 | 4.3% | Low | Low | ≤15% |
| 2019 | 2016 | 18,700 | 26,500 | 30,700 | 3.80% | Low | Low | ≤15% |
| 2020 | 2017 | 13,600 | 22,800 | 24,900 | 4.10% | Low | Low | ≤15% |
| 2021 | 2018 | 8,000 | 22,000 | 44,500 | 7.72% | Med | Low | ≤15% |
| 2022 | 2019 | 22,300 | 20,100 | 52,800 | 6.98% | Med | Low | ≤15% |
| 2023 | 2020 | 21,500 | 30,800 | 57,600 | 7.87% | Med | Med | ≤20% |
| 2024 | 2021 | 42,800 | 88,600 | 110,800 | 7.79% | Med | High | ≤30% |
| 2025 | 2022 | 53,000 | 71,900 | 45,100 | 7.48% | Med | High | ≤30% |
| 2026[d/] | 2023 | 35,100 | 42,600 | 75,300 | 6.08% | Med | High | ≤30% |
| 2027[d/] | 2024 | 38,500 | 69,500 | 53,200 | - | - | High | - |
| 2028[d/] | 2025 | 46,100 | 40,200 | 33,100 | - | - | Medium | - |

a/ Developed by the OCN Coho Work Group as a result of the 2000 Review of Amendment 13. See Appendix A, Table A-4 for details.
b/ OCN workgroup matrix was modified during the 2012 methodology review. For 2013, the marine survival category is determined by a predicted OCN adult survival rate that is based on the natural smolt to jack relationship at Mill Creek in the Yaquina River basin.
c/ OCN workgroup matrix was modified during the 2013 methodology review. Beginning in 2014, the marine survival category is determined by a predicted OCN adult survival rate that is based on biologic and oceanographic indicators.
d/ Preliminary.

## REFERENCES


DeFilippo, L.B., Buehrens, T.W., Scheuerell, M., Kendall, N.W., and D.E. Schindler. 2021. Improving short-term recruitment forecasts for coho salmon using a spatiotemporal integrated population model. Fisheries Research 242. https://doi.org/10.1016/j.fishres.2021.106014

NMFS. 2012. Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH) Consultation. Effects of the Pacific Coast Salmon Plan Fisheries on the Lower Columbia River Chinook Evolutionarily Significant Unit. Dept. of Comm. NMFS, NWR, Salmon Management Division. NWR-2011-6415. April 26, 2012.

ODFW. 2014. Conservation Objective for Southern Oregon Coastal Chinook. November 2014 Council Meeting. Agenda Item F.2.a, Attachment 6.

O'Farrell, M., Hendrix, N., and Mohr, M. 2016. An evaluation of preseason abundance forecasts for Sacramento River winter Chinook salmon. Report prepared for the 2016 Salmon Methodology Review. Pacific Fishery Management Council, Portland, Oregon. https://www.pcouncil.org/documents/2016/11/agenda-item-d-2-attachment-1-an-evaluation-of-preseason-abundance-forecasts.pdf/

PFMC. 2014. Preseason Report I: Stock Abundance Analysis and Environmental Assessment - Part 1 for 2015 Ocean Salmon Fishery Regulations. Pacific Fishery Management Council, Portland, Oregon. https://www.pcouncil.org/documents/2014/02/2014-preseason-report-i.pdf/

PFMC. 2021. Southern Oregon/Northern California Coast coho Salmon Workgroup Report: Fishery Harvest Control Rule. Pacific Fishery Management Council, Portland, Oregon. https://www.pcouncil.org/documents/2021/10/f-3-a-soncc-workgroup-report-1-electronic-only-fishery-harvest-control-rule-risk-assessment.pdf/

PFMC. 2023. Preseason Report I: Stock Abundance Analysis and Environmental Assessment - Part 1 for 2023 Ocean Salmon Fishery Regulations. Pacific Fishery Management Council, Portland, Oregon. https://www.pcouncil.org/documents/2023/03/supplemental-preseason-report-i-stock-abundance-analysis-and-environmental-assessment-part-1-for-2023-ocean-salmon-fishery-regulations-electronic-only.pdf/

PFMC. 2025a. Preseason Report I: Stock Abundance Analysis and Environmental Assessment - Part 1 for 2025 Ocean Salmon Fishery Regulations. Pacific Fishery Management Council, Portland, Oregon. https://www.pcouncil.org/documents/2025/03/2025-preseason-report-i.pdf/

PFMC. 2025b. Preseason Report II: Proposed Alternatives and Environmental Assessment - Part 2 for 2025 Ocean Salmon Fishery Regulations. Pacific Fishery Management Council, Portland, Oregon. https://www.pcouncil.org/documents/2025/03/2025-preseason-report-ii.pdf/

PFMC. 2025c. Preseason Report III: Council Adopted Management Measures and Environmental Assessment Part 3 for 2025 Ocean Salmon Fisheries. Pacific Fishery Management Council, Portland, Oregon. https://www.pcouncil.org/documents/2025/04/2025-preseason-report-iii.pdf/

PFMC. 2026. Review of 2025 Ocean Salmon Fisheries: Stock Assessment and Fishery Evaluation Document for the Pacific Coast Salmon Fishery Management Plan. Pacific Fishery Management Council, Portland, Oregon. https://www.pcouncil.org/documents/2026/02/review-of-2025-ocean-salmon-fisheries.pdf/

SRWG. 2024. Updated $F_{MSY}$ Proxy and $S_{MSY}/S_{MSP}$ Ratio. November 2024 Council Meeting. Agenda Item F.2, Attachment 2.

WDFW. 2026. 2026 Wild Coho Forecasts for Puget Sound, Washington Coast, and Lower Columbia. Washington Department of Fish and Wildlife, Olympia, Washington.

# APPENDIX A. SUMMARY OF COUNCIL STOCK MANAGEMENT GOALS

The following tables reflect the current management practices as of 2026 and may not reflect the values in the current FMP through Amendment 24. Pending FMP updates include:

- Sacramento River fall Chinook $F_{MSY}$ from 0.78 to 0.58, adopted in 2024
- Southern Oregon Chinook MFMT from 0.78 to 0.54, adopted in 2015

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| CHINOOK | | | | | |
|---|---|---|---|---|---|
| **Stocks In The Fishery** | **Conservation Objective** | $S_{MSY}$ | MSST | MFMT ($F_{MSY}$) | ACL |
| Sacramento River Fall Indicator stock for the Central Valley fall (CVF) Chinook stock complex. | 122,000-180,000 natural and hatchery adult spawners (MSY proxy adopted 1984). This objective is intended to provide adequate escapement of natural and hatchery production for Sacramento and San Joaquin fall and late-fall stocks based on habitat conditions and average run-sizes as follows: Sacramento River 1953-1960; San Joaquin River 1972-1977 (ASETF 1979; PFMC 1984; SRFCRT 1994). The objective is less than the estimated basin capacity of 240,000 spawners (Hallock 1977), but greater than the 118,000 spawners for maximum production estimated on a basin by basin basis before Oroville and Nimbus Dams (Reisenbichler 1986). | 122,000 | 91,500 | 58% Proxy (SRWG 2024)<br><br>(Current value; FMP update pending) | Based on $F_{ABC}$ and annual ocean abundance. $F_{ABC}$ is $F_{MSY}$ reduced by Tier 2 (10%) uncertainty |
| Central Valley Spring ESA Threatened | NMFS ESA consultation standard/recovery plan: Conform to Sacramento River Winter Chinook ESA consultation standard (no defined objective for ocean management prior to listing). | Undefined | Undefined | Undefined | ESA consultation standard applies. |
| Sacramento River Winter ESA Endangered | NMFS ESA consultation standard/recovery plan: Recreational seasons: Point Arena to Pigeon Point between the first Saturday in April and the second Sunday in November; Pigeon Point to the U.S./Mexico Border between the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. Commercial seasons: Point Arena to the U.S./Mexico border between May 1 and September 30, except Point Reyes to Point San Pedro between October 1 and 15 (Monday through Friday). Minimum size limit ≥ 26 inches total length. Guidance from NMFS in 2010 and 2011 required implementation of additional closures and/or increased sized limits in the recreational fishery South of Point Arena. The winter-run management framework and consultation standard is an abundance based age-3 impact rate control rule established in 2018 (NMFS 2018) which sets the maximum allowable age-3 impact rate based on the forecast age-3 escapement in the absence of fisheries: above 3,000, the allowable, impact rate is fixed at 20 percent; between 3,000 and 500, the allowable impact rate declines linearly from 20 percent to 10 percent; between 500 and 0, the allowable impact rate declines linearly from 10 percent to 0 percent. | Undefined | Undefined | Undefined | |
| California Coastal Chinook ESA Threatened | NMFS ESA consultation standard/recovery plan: Limit ocean fisheries to no more than a 16.0% age-4 ocean harvest rate on Klamath River fall Chinook. | Undefined | Undefined | Undefined | |
| Klamath River Fall Indicator stock for the Southern Oregon Northern California (SONC) Chinook stock complex. | At least 32% of potential adult natural spawners, but no fewer than 40,700 naturally spawning adults in any one year. Brood escapement rate must average at least 32% over the long-term, but an individual brood may vary from this range to achieve the required tribal/nontribal annual allocation. Natural area spawners to maximize catch estimated at 40,700 adults (STT 2005). | 40,700 | 30,525 | 71% (STT 2005) | Based on $F_{ABC}$ and annual ocean abundance. $F_{ABC}$ is $F_{MSY}$ reduced by Tier 1 (5%) uncertainty |
| Klamath River - Spring | Undefined | Undefined | Undefined | Undefined | Component stock of SONC complex; ACL indicator stock is KRFC |
| Smith River | Undefined | Undefined | Undefined | 78% Proxy (SAC 2011a) | |

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes[a/] (Page 2 of 6)

| CHINOOK | | | | | | |
|---|---|---|---|---|---|---|
| **Stocks In The Fishery** | **Conservation Objective** | | $S_{MSY}$ | MSST | MFMT ($F_{MSY}$) | ACL |
| Southern Oregon | 41,000 escapement at Huntley Park, Gold Beach, Oregon | | 34,992 | 20,500 | 54% Proxy (ODFW 2014)<br><br>(Current value; FMP update pending) | Indicator stock is KRFC |
| Central and Northern Oregon | Unspecified portion of an aggregate 150,000 to 200,000 natural adult spawners for Oregon coast (Thompson 1977 and McGie 1982) measured by 60-90 fish per mile in index streams. ODFW developing specific conservation objectives for spring and fall stocks that may be implemented without plan amendment upon approval by the Council. | | 60 Fish per mile in index streams | 30 Fish per mile in index streams | 78% Proxy (SAC 2011a) | Component stock(s) of FNMC complex; international exception applies, ACLs are not applicable |
| Willapa Bay Fall | Undetermined in FMP. WDFW spawning escapement objective of 4,350. | | 3,393 | 1,697 | 78% Proxy (SAC 2011a) | |
| Grays Harbor Fall Indicator stock for the Far North Migrating Coastal (FNMC) Chinook stock complex | 13,326 natural adult spawners - MSP based on full seeding of spawning and rearing habitat (QDNR & WDFW 2014). | Annual natural spawning escapement targets may vary from FMP conservation objectives if agreed to by WDFW and treaty tribes under the provisions of *Hoh v. Baldrige* and subsequent U.S. District Court orders. | 13,326 | 6,663 | 63% | FNMC complex; international exception applies, ACLs are not applicable. |
| Queets Fall Indicator stock for the FNMC Chinook stock complex | Manage terminal fisheries for 40% harvest rate, but no less than 2,500 natural adult spawners, the MSY level estimated by Cooney (1984). | | 2,500 | 1,250 | 87% (Cooney 1984) | |
| Hoh Fall Indicator stock for the FNMC Chinook stock complex | Manage terminal fisheries for 40% harvest rate, but no less than 1,200 natural adult spawners, the MSY level estimated by Cooney (1984). | | 1,200 | 600 | 90% (Cooney 1984) | |
| Quillayute Fall Indicator stock for the FNMC Chinook stock complex | Manage terminal fisheries for 40% harvest rate, but no less than 3,000 natural adult spawners, the MSY level estimated by Cooney (1984). | | 3,000 | 1,500 | 87% (Cooney 1984) | |
| Hoko Summer/Fall Indicator stock for the FNMC Chinook stock complex | 850 natural adult spawners, the MSP level estimated by Ames and Phinney (1977). May include adults used for supplementation program. | | 850 | 425 | 78% Proxy (SAC 2011a) | |
| Grays Harbor Spring | 1,400 natural adult spawners. | | 1,400 | 700 | 78% Proxy (SAC 2011a) | FNMC complex; international exception applies, ACLs are not applicable. |
| Queets Sp/Su | Manage terminal fisheries for 30% harvest rate, but no less than 700 natural adult spawners. | | 700 | 350 | 78% Proxy (SAC 2011a) | |
| Hoh Spring/Summer | Manage terminal fisheries for 31% harvest rate, but no less than 900 natural adult spawners. | | 900 | 450 | 78% Proxy (SAC 2011a) | |
| Quillayute Spring/Summer | 1,200 natural adult spawners for summer component (MSY). | | 1,200 | 600 | 78% Proxy (SAC 2011a) | |

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes[a/] (Page 3 of 6)

| CHINOOK | | | | | |
|---|---|---|---|---|---|
| **Stocks In The Fishery** | **Conservation Objective** | $S_{MSY}$ | MSST | MFMT ($F_{MSY}$) | ACL |
| Willapa Bay Fall (hatchery) | 8,200 adult return to hatchery. WDFW spawning escapement objective of 9,800 hatchery spawners. | Not applicable to hatchery stocks. | | | |
| Quinault Fall (hatchery) | Hatchery production. | | | | |
| North Lewis River Fall | NMFS consultation standard/recovery plan. McIsaac (1990) stock-recruit analysis supports MSY objective of 5,700 natural adult spawners. | 5,700 | ESA consultation standard applies. | 76% | ESA consultation standard applies. |
| Snake River Fall | NMFS consultation standard/recovery plan. No more than 70.0% of 1988-1993 base period AEQ exploitation rate for all ocean fisheries. | Undefined | | Undefined | |
| Upper Willamette Spring | NMFS consultation standard/recovery plan. Not applicable for ocean fisheries. | Undefined | | Undefined | |
| Columbia Upper River Spring | NMFS consultation standard/recovery plan. Not applicable for ocean fisheries. | Undefined | | Undefined | |
| Snake River Spring/Summer | NMFS consultation standard/recovery plan. Not applicable for ocean fisheries. | Undefined | | Undefined | |
| Columbia Lower River Hatchery Fall | 12,600 adults for hatchery egg-take. | Not applicable to hatchery stocks. | | | |
| Columbia Lower River Hatchery Spring | 2,700 adults to meet Cowlitz, Kalama, and Lewis Rivers broodstock needs. | | | | |
| Columbia Mid-River Bright Hatchery Fall | 4,700 adults for Bonneville Hatchery and 2,000 for Little White Salmon Hatchery egg-take. | | | | |
| Columbia Spring Creek Hatchery Fall | 7,000 adults to meet hatchery egg-take goal. | | | | |
| Columbia Upper River Bright Fall | 40,000 natural bright adults above McNary Dam (MSY proxy adopted in 1984 based on CRFMP). The management goal has been increased to 60,000 by Columbia River managers in recent years. | 39,625 (Langness and Reidinger 2003) | 19,812 | 85.91% (Langness and Reidinger 2003) | International exception applies, ACLs are not applicable. |
| Columbia Upper River Summer | Hold ocean fishery impacts at or below base period; recognize CRFMP objective – MSY proxy of 80,000 to 90,000 adults above Bonneville Dam, including both Columbia and Snake River stocks (state and tribal management entities considering separate objectives for these stocks). | 12,143 (CTC 1999) | 6,071 | 75% (CTC 1999) | |

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes[a/] (Page 4 of 6)

| CHINOOK | | | | | | |
|---|---|---|---|---|---|---|
| **Stocks In The Fishery** | **Conservation Objective** | | $S_{MSY}$ | MSST | MFMT ($F_{MSY}$) | ACL |
| Eastern Strait of Juan de Fuca Summer/Fall | NMFS consultation standard/recovery plan. No more than 10.0% Southern U.S. (SUS) Rebuilding Exploitation Rate (RER) for the Elwha River and for the Dungeness River. 2011 comanagers Resource Management Plan (RMP) | Annual natural spawning escapement targets may vary from FMP conservation objectives if agreed to by WDFW and treaty tribes under the provisions of U.S. v. Washington and subsequent U.S. District Court orders. | Undefined | ESA consultation standard applies | Undefined | ESA Consultation standard applies. |
| Skokomish Summer/Fall | NMFS consultation standard/recovery plan. No more than 50.0% total RER. 2011 comanagers RMP | | Undefined | | Undefined | |
| Mid Hood Canal Summer/Fall | NMFS consultation standard/recovery plan. No more than 15.0% preterminal SUS CERC. 2011 comanagers RMP | | Undefined | | Undefined | |
| Nooksack Spring early | NMFS consultation standard/recovery plan. No more than 7.0% SUS CERC. 2011 comanagers RMP | | Undefined | | Undefined | |
| Skagit Summer/Fall | NMFS consultation standard/recovery plan. No more than 50.0% total RER. 2011 comanagers RMP | | Undefined | | Undefined | |
| Skagit Spring | NMFS consultation standard/recovery plan. No more than 38.0% total RER. 2011 comanagers RMP | | Undefined | | Undefined | |
| Stillaguamish Summer/Fall | NMFS consultation standard/recovery plan. No more than 25.0% total RER. 2011 comanagers RMP | | Undefined | | Undefined | |
| Snohomish Summer/Fall | NMFS consultation standard/recovery plan. No more than 15.0% SUS RER. 2011 comanagers RMP | | Undefined | | Undefined | |
| Cedar River Summer/Fall | NMFS consultation standard/recovery plan. No more than 20.0% SUS RER. 2011 comanagers RMP | | Undefined | | Undefined | |
| White River Spring | NMFS consultation standard/recovery plan. No more than 20.0% total RER. 2011 comanagers RMP | | Undefined | | Undefined | |
| Green River Summer/Fall | NMFS consultation standard/recovery plan. No more than 15.0% preterminal SUS RER, at least 5,800 adult spawners. | | Undefined | | Undefined | |
| Nisqually River Summer/Fall | NMFS consultation standard/recovery plan. No more than 65.0% total RER. 2011 comanagers RMP | | Undefined | | Undefined | |
| Puyallup Summer/Fall | NMFS consultation standard/recovery plan. No more than 50.0% total RER. 2011 comanagers RMP | | Undefined | | Undefined | |

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes[a/] (Page 5 of 6)

| COHO | | | | | |
|---|---|---|---|---|---|
| **Stocks In The Fishery** | **Conservation Objective** | $S_{MSY}$ | MSST | MFMT ($F_{MSY}$) | ACL |
| Central California Coast ESA Threatened | NMFS ESA consultation standard/recovery plan: No retention of coho south of the OR/CA border. | Undefined | ESA consultation standard applies | Undefined | ESA consultation standard applies. |
| Southern Oregon/Northern California Coast ESA Threatened | A total fishery (marine and freshwater) exploitation rate (ER) limit of 15% for all populations within the SONCC Evolutionary Significant Unit, except the Trinity River coho population unit (Upper Trinity River, Lower Trinity River, SF Trinity River) which has a total fishery ER limit of 16%, including landed and non-landed mortality of age-3 adult SONCC coho salmon in any individual year. No retention of coho in the EEZ south of the OR/CA border. Freshwater impacts determined using projections provided by co-managing agencies and tribes (i.e., the Oregon Department of Fish and Wildlife, Yurok Tribe, Hoopa Valley Tribe, California Department of Fish and Wildlife). | Undefined | | Undefined | |
| Oregon Coastal Natural ESA Threatened | NMFS ESA consultation standard/recovery plan: Total AEQ exploitation rate limit based on parental seeding level and marine survival matrix in FMP Table 3-2. | Undefined | | Undefined | |
| Lower Columbia Natural ESA Threatened | NMFS ESA consultation standard/recovery plan: AEQ exploitation rate limit on ocean and mainstem Columbia fisheries identified in annual NMFS guidance. | Undefined | | Undefined | |
| Oregon Coast Hatchery | Hatchery production. | Not applicable to hatchery stocks | | | |
| Columbia River Late Hatchery | Hatchery rack return goal of 14,200 adults. | | | | |
| Columbia River Early Hatchery | Hatchery rack return goal of 6,200 adults. | | | | |
| Willapa Bay - Hatchery | Hatchery rack return goal of 6,100 adults. | | | | |
| Quinault - Hatchery | Hatchery production. | | | | |
| Quillayute - Summer Hatchery | Hatchery production. | | | | |
| South Puget Sound Hatchery | Hatchery rack return goal of 52,000 adults. | | | | |
| Willapa Bay Natural | 17,200 natural-area spawners. | 17,200 | 8,600 | 74% | Based on $F_{ABC}$ and annual ocean abundance. $F_{ABC}$ is $F_{MSY}$ reduced by Tier 1 (5%) uncertainty |

TABLE A-1. Conservation objectives and reference points governing harvest control rules and status determination criteria for salmon stocks and stock complexes[a/] (Page 6 of 6)

| COHO | | | | | | |
|---|---|---|---|---|---|---|
| **Stocks In The Fishery** | **Conservation Objective** | | $S_{MSY}$ | MSST | MFMT ($F_{MSY}$) | ACL |
| Grays Harbor | 35,400 natural adult spawners (MSP based on WDF [1979]) | Annual natural spawning escapement targets may vary from FMP conservation objectives if agreed to by WDFW and treaty tribes under the provisions of Hoh v. Baldrige, U.S. v. Washington, or subsequent U.S. District Court orders | 24,426 $S_{MSP}$ (FMP) *$F_{SMY}$ (SAC 2010b) | 18,320 (Johnstone et al. 2011) | MFMT=65% (Johnstone et al. 2011) $F_{MSY}$=69% (SAC 2011b) | International exception applies, ACLs are not applicable. |
| Queets | MSY range of 5,800 to 14,500 natural adult spawners (Lestelle et al 1984) | | 5,800 (Johnstone et al. 2011) | 4,350 (Johnstone et al. 2011) | MFMT=65% (Johnstone et al. 2011) $F_{MSY}$=68% (SAC 2011b) | |
| Hoh | MSY range of 2,000 to 5,000 natural adult spawners (Lestelle et al. 1984) | | 2,520 (SAC 2010b) | 1,890 $S_{MSY}$*0.75 | MFMT=65% (Johnstone et al. 2011) $F_{MSY}$=69% (SAC 2011b) | |
| Quillayute - Fall | MSY range of 6,300 to 15,800 natural adult spawners (Lestelle et al. 1984) | | 6,300 (Johnstone et al. 2011) | 4,725 (Johnstone et al. 2011) | MFMT=59%; $F_{MSY}$=59% (SAC 2011b) | |
| Strait of Juan de Fuca | Total allowable MSY exploitation rate of: 0.60 for ocean age-3 abundance > 27,445; 0.40 for ocean age-3 abundance >11,679 and ≤27,445; 0.20 for ocean age-3 abundance ≤11,679 | | 11,000 (Bowhay et al. 2009) | 7,000 (Bowhay et al. 2009) | 60% (Bowhay et al. 2009) | |
| Hood Canal | Total allowable MSY exploitation rate of: 0.65 for ocean age-3 abundance > 41,000; 0.45 for ocean age-3 abundance >19,545 and ≤41,000; 0.20 for ocean age-3 abundance ≤19,545 | | 14,350 (Bowhay et al. 2009) | 10,750 (Bowhay et al. 2009) | 65% (Bowhay et al. 2009) | |
| Skagit | Total allowable MSY exploitation rate of: 0.60 for ocean age-3 abundance > 62,500; 0.35 for ocean age-3 abundance >22,857 and ≤62,500; 0.20 for ocean age-3 abundance ≤22,857 | | 25,000 (Bowhay et al. 2009) | 14,857 (Bowhay et al. 2009) | 60% (Bowhay et al. 2009) | |
| Stillaguamish | Total allowable MSY exploitation rate of: 0.50 for ocean age-3 abundance > 20,000; 0.35 for ocean age-3 abundance >9,385 and ≤20,000; 0.20 for ocean age-3 abundance ≤9,385 | | 10,000 (Bowhay et al. 2009) | 6,100 (Bowhay et al. 2009) | 50% (Bowhay et al. 2009) | |
| Snohomish | Total allowable MSY exploitation rate of: 0.60 for ocean age-3 abundance > 125,000; 0.40 for ocean age-3 abundance >51,667 and ≤125,000; 0.20 for ocean age-3 abundance ≤51,667 | | 50,000 (Bowhay et al. 2009) | 31,000 (Bowhay et al. 2009) | 60% (Bowhay et al. 2009) | |

| PINK (odd-numbered years) | | | | | |
|---|---|---|---|---|---|
| **Stocks In The Fishery** | **Conservation Objective** | $S_{MSY}$ | MSST | MFMT ($F_{MSY}$) | ACL |
| Puget Sound | 900,000 natural spawners or consistent with provisions of the Pacific Salmon Treaty (Fraser River Panel). | 900,000 | 450,000 | Undefined | International exception applies, ACLs are not applicable. |

a/ Some hatchery goals and ESA consultation standards have been updated relative to the version of this table in the FMP.

TABLE A-2. Allowable fishery impact rate criteria for OCN coho stock components under the Salmon Fishery Management Plan Amendment 13.

The fishery impact rate criteria previously shown in Table A-2 is no longer used for management purposes and therefore is no longer included in this report. The criteria currently in use is presented in Table A-4. The matrix formerly published in Table A-2 is available in the 2025 Preseason Report 1: Stock Abundance Analysis and Environmental Assessment Part 1 for 2025 Ocean Salmon Fishery Regulations (PFMC 2025a).

TABLE A-3. Fishery impact rate criteria for OCN coho stock components based on the harvest matrix resulting from the OCN work group 2000 review of Amendment 13.

The fishery impact rate criteria previously shown in Table A-3 is no longer used for management purposes and therefore is no longer included in this report. The criteria currently in use is presented in Table A-4. The matrix formerly published in Table A-3 is available in the 2025 Preseason Report 1: Stock Abundance Analysis and Environmental Assessment Part 1 for 2025 Ocean Salmon Fishery Regulations (PFMC 2025a).

TABLE A-4. Fishery impact rate criteria for OCN coho stock components based on the harvest matrix resulting from the OCN work group 2000 review of Amendment 13 including modifications to the marine survival index adopted during the 2012 and 2013 methodology reviews.

| Parent Spawner Status[a/] | Marine Survival Index (Wild adult coho salmon survival as predicted by the two-variable GAM ensemble forecast) | | | |
|---|---|---|---|---|
| | Extremely Low <2% | Low 2%-4.5% | Medium >4.5%-8% | High >8% |
| **High** Parent Spawners > 75% of full seeding | E ≤ 8% | J ≤ 15% | O ≤ 30% | T ≤ 45% |
| **Medium** Parent Spawners > 50% & ≤ 75% of full seeding | D ≤ 8% | I ≤ 15% | N ≤ 20% | S ≤ 38% |
| **Low** Parent Spawners > 19% & ≤ 50% of full seeding | C ≤ 8% | H ≤ 15% | M ≤ 15% | R ≤ 25% |
| **Very Low** Parent Spawners > 4 fish per mile & ≤ 19% of full seeding | B ≤ 8% | G ≤ 11% | L ≤ 11% | Q ≤ 11% |
| **Critical** Parent Spawners ≤4 fish per mile | A 0 – 8% | F 0 – 8% | K 0 – 8% | P 0 – 8% |

**Sub-aggregate and Basin Specific Spawner Criteria Data**

| Sub-aggregate | Miles of Available Spawning Habitat | 100% of Full Seeding | "Critical" | | Very Low, Low, Medium & High | | |
|---|---|---|---|---|---|---|---|
| | | | 4 Fish per Mile | 12% of Full Seeding | 19% of Full Seeding | 50% of Full Seeding | 75% of Full Seeding |
| Northern | 899 | 21,700 | 3,596 | NA | 4,123 | 10,850 | 16,275 |
| North-Central | 1,163 | 55,000 | 4,652 | NA | 10,450 | 27,500 | 41,250 |
| South-Central | 1,685 | 50,000 | 6,740 | NA | 9,500 | 25,000 | 37,500 |
| Southern *(Removed per adoption of Amendment 16)* | | | | | | | |
| Coastwide Total | *3,747* | *126,700* | *14,988* | | *24,073* | *63,350* | *95,025* |

a/ Parental spawner abundance status for the OCN aggregate assumes the status of the weakest sub-aggregate.

TABLE A-5. Council adopted management objectives for Puget Sound natural coho management units, expressed as exploitation rate ceilings for critical, low and normal abundance based status categories, with runsize breakpoints (abundances expressed as ocean age-3).

| Status | Management Unit | | | | |
|---|---|---|---|---|---|
| | **Strait of Juan de Fuca** | **Hood Canal** | **Skagit** | **Stillaguamish** | **Snohomish** |
| Critical/Low Runsize Breakpoint | 11,679 | 19,545 | 22,857 | 9,385 | 51,667 |
| Critical Exploitation Rate | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Low/normal runsize breakpoint | 27,445 | 41,000 | 62,500 | 20,000 | 125,000 |
| Low Exploitation Rate | 0.4 | 0.45 | 0.35 | 0.35 | 0.4 |
| Normal Exploitation Rate | 0.6 | 0.65 | 0.6 | 0.5 | 0.6 |

Table A-6. Council recommended management objectives for Lower Columbia River natural tule Chinook, expressed as exploitation rate ceilings for abundance based status categories, with runsize forecast bins expressed as adult river mouth return forecasts of Lower Columbia River hatchery tule Chinook.

| **Runsize Forecast Bins** | <24,000 | 24,001 to 31,000 | 31,0001 to 67,000 | >67,000 |
|---|---|---|---|---|
| **Maximum Exploitation Rate** | 0.30 | 0.35 | 0.38 | 0.41 |

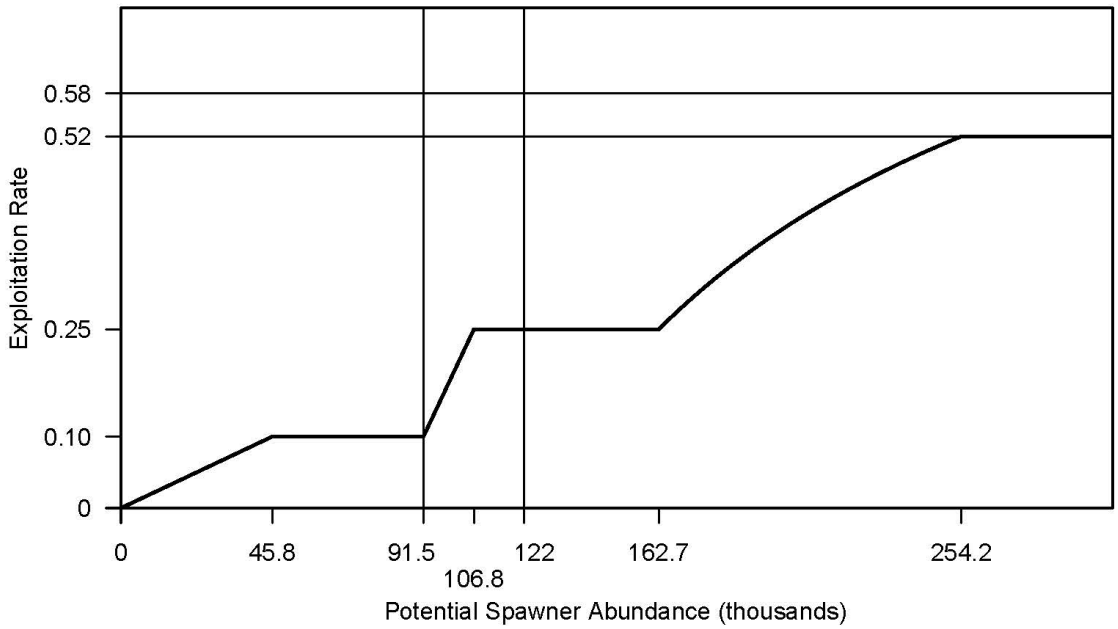


FIGURE A-1. Sacramento River fall Chinook control rule. Potential spawner abundance is the predicted hatchery and natural area adult spawners in the absence of fisheries, which is equivalent to the Sacramento Index. See the salmon FMP, Section 3.3.6, for control rule details.

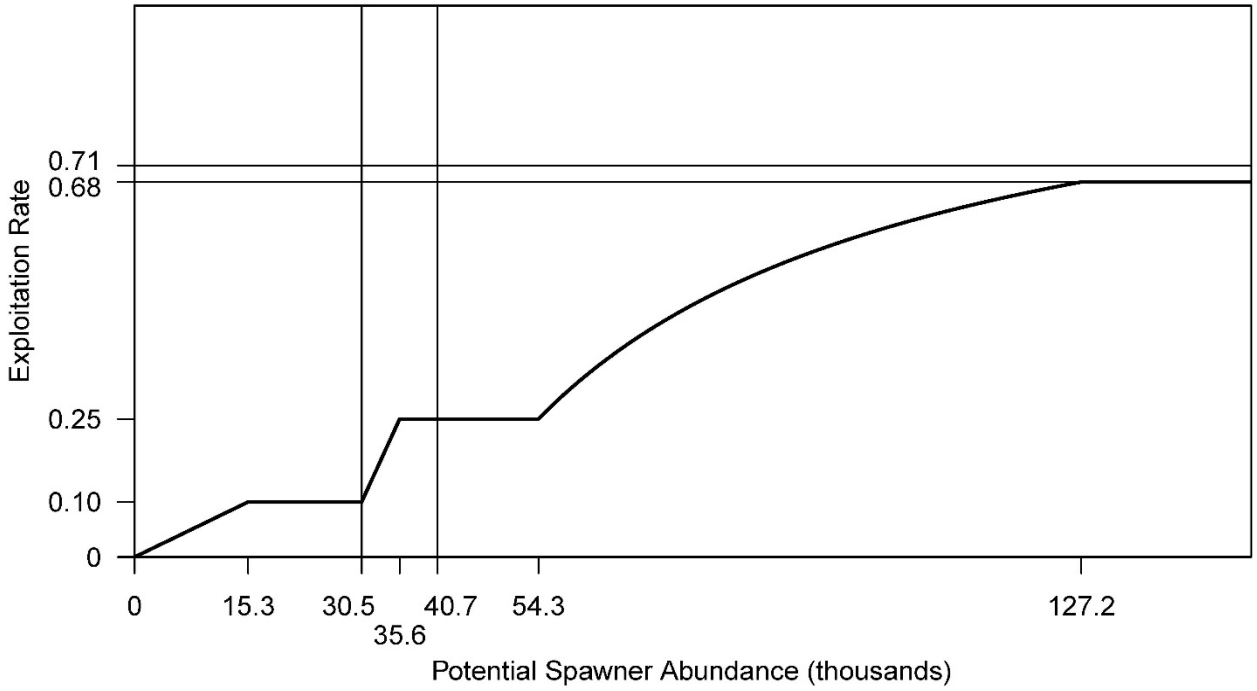


FIGURE A-2. Klamath River fall Chinook control rule. Potential spawner abundance is the predicted natural area adult spawners in the absence of fisheries. See the salmon FMP, Section 3.3.6, for control rule details.

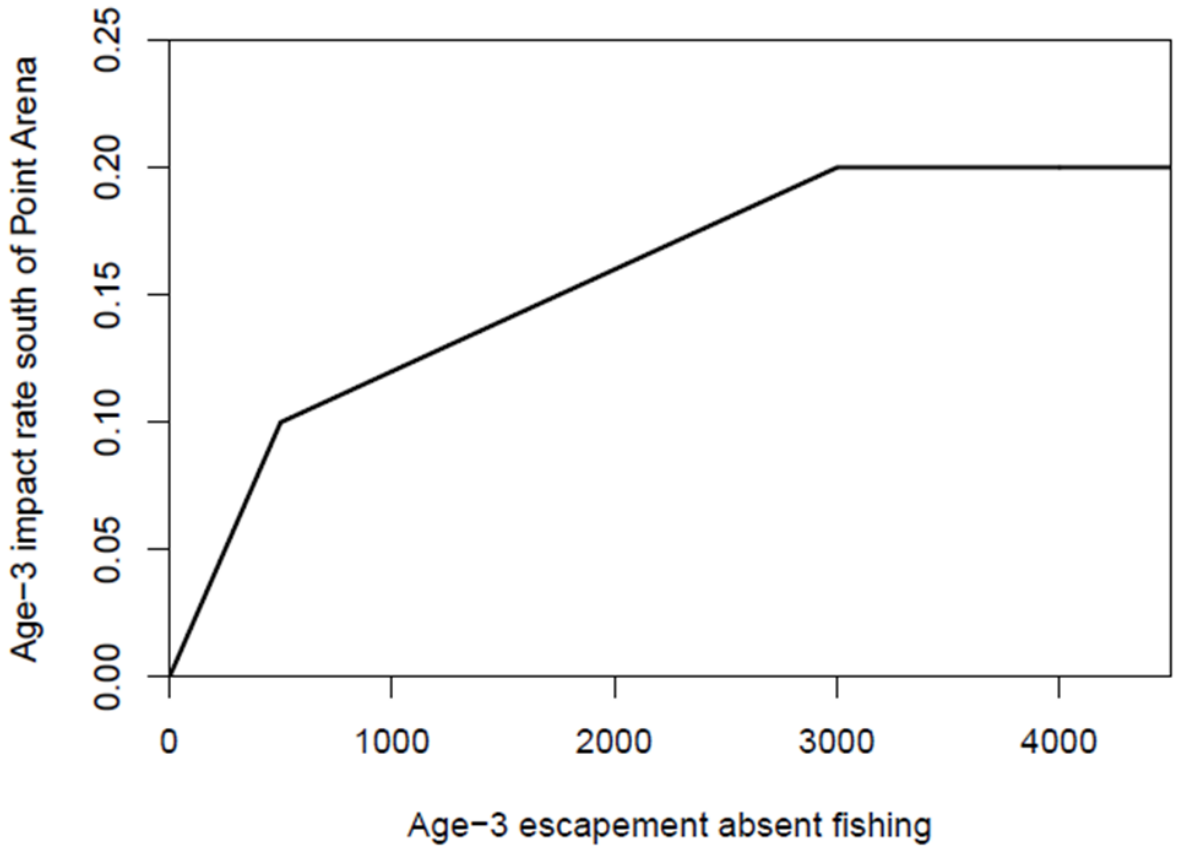


FIGURE A-3. Sacramento River winter Chinook impact rate control rule. The maximum forecast age-3 impact rate for the area south of Point Arena, California, is determined by the forecasted age-3 escapement absent fishing.

## APPENDIX B. SALMON HARVEST ALLOCATION SCHEDULES

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## *5.3 ALLOCATION*

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

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

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

#### *5.3.1.1 Goal, Objectives, and Priorities*

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

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

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

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

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

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

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

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

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

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

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

#### *5.3.1.2 Allocation Schedule Between Gear Types*

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

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

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

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

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

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

1. Preseason species trades (Chinook and coho) that vary from the allocation schedule may be made by the Council based upon the recommendation of the pertinent recreational and commercial SAS representatives north of Cape Falcon. The Council will compare the socioeconomic impacts of any such recommendation to those of the standard allocation schedule before adopting the allocation that best meets FMP management objectives.

2. Inseason transfers, including species trades of Chinook and coho, may be permitted in either direction between recreational and commercial fishery allocations to allow for uncatchable fish in one fishery to

be reallocated to the other. Fish will be deemed "uncatchable" by a respective commercial or recreational fishery only after considering all possible annual management actions to allow for their harvest which meet framework harvest management objectives, including single species or exclusive registration fisheries. Implementation of inseason transfers will require (1) consultation with the pertinent recreational and commercial SAS members and the STT, and (2) a clear establishment of available fish and impacts from the transfer.

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

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

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

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

#### 5.3.1.3 Recreational Subarea Allocations

**Coho**

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

In years with no Area 4B fishery, the distribution of coho north of Leadbetter Point (50 percent of the total recreational TAC) will be divided to provide 74 percent to the area between Leadbetter Point and the Queets River (Westport), 5.2 percent to the area between Queets River and Cape Flattery (La Push), and 20.8

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

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

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

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

TABLE 5-3. Example distributions of the recreational coho TAC north of Leadbetter Point.

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

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

## Chinook

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

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

### 5.3.2 Commercial and Recreational Fisheries South of Cape Falcon

The allocation of allowable ocean harvest of coho salmon south of Cape Falcon has been developed to provide a more stable recreational season and increased economic benefits of the ocean salmon fisheries at varying stock abundance levels. When coupled with various recreational harvest reduction measures or the timely transfer of unused recreational allocation to the commercial fishery, the allocation schedule is designed to help secure recreational seasons extending at least from Memorial Day through Labor Day when possible, assist in maintaining commercial markets even at relatively low stock sizes, and fully utilize available harvest. Total ocean catch of coho south of Cape Falcon will be treated as a quota to be allocated between troll and recreational fisheries as provided in Table 5-4.

(Note: The allocation schedule provides guidance only when coho abundance permits a directed coho harvest, not when the allowable impacts are insufficient to allow coho retention south of Cape Falcon. At such low levels, allocation of the allowable impacts will be accomplished during the Council's preseason process.)

TABLE 5-4. Allocation of allowable ocean harvest of coho salmon (thousands of fish) south of Cape Falcon.[a/]

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

a/ The allocation schedule is based on the following formula: first 150,000 coho to the recreational base (this amount may be reduced as provided in footnote b); over 150,000 to 350,000 fish, share at 2:1, 0.667 to troll and 0.333 to recreational; over 350,000 to 800,000 the recreational share is 217,000 plus 14% of the available fish over 350,000; above 800,000 the recreational share is 280,000 plus 10% of the available fish over 800,000.
Note: The allocation schedule provides guidance only when coho abundance permits a directed coho harvest, not when the allowable impacts are insufficient to allow general coho retention south of Cape Falcon. At such low levels, allocation of the allowable impacts will be determined in the Council's preseason process. Deviations from the allocation may also be allowed to meet consultation standards for ESA-listed stocks (e.g., the 1998 biological opinion for California coastal coho requires no retention of coho in fisheries off California).
b/ If the commercial allocation is insufficient to meet the projected hook-and-release mortality associated with the commercial all-salmon-except-coho season, the recreational allocation will be reduced by the number needed to eliminate the deficit.
c/ When the recreational allocation is 167,000 coho or less, special allocation provisions apply to the recreational harvest distribution by geographic area (unless superseded by requirements to meet a consultation standard for ESA-listed stocks); see text of FMP as modified by Amendment 11 allocation provisions.

The allocation schedule is designed to give sufficient coho to the recreational fishery to increase the probability of attaining no less than a Memorial Day to Labor Day season as stock sizes increase. This increased allocation means that, in many years, actual catch in the recreational fishery may fall short of its allowance. In such situations, managers will make an inseason reallocation of unneeded recreational coho to the south of Cape Falcon troll fishery. The reallocation should be structured and timed to allow the commercial fishery sufficient opportunity to harvest any available reallocation prior to September 1, while still assuring completion of the scheduled recreational season (usually near mid-September) and, in any event, the continuation of a recreational fishery through Labor Day. This reallocation process will occur

no later than August 15 and will involve projecting the recreational fishery needs for the remainder of the summer season. The remaining projected recreational catch needed to extend the season to its scheduled closing date will be a harvest guideline rather than a quota. If the guideline is met prior to Labor Day, the season may be allowed to continue if further fishing is not expected to result in any considerable danger of impacting the allocation of another fishery or of failing to meet an escapement goal.

The allocation schedule is also designed to assure there are sufficient coho allocated to the troll fishery at low stock levels to ensure a full Chinook troll fishery. This hooking mortality allowance will have first priority within the troll allocation. If the troll allocation is insufficient for this purpose, the remaining number of coho needed for the estimated incidental coho mortality will be deducted from the recreational share. At higher stock sizes, directed coho harvest will be allocated to the troll fishery after hooking mortality needs for Chinook troll fishing have been satisfied.

The allowable harvest south of Cape Falcon may be further partitioned into subareas to meet management objectives of the FMP. Allowable harvests for subareas south of Cape Falcon will be determined by an annual blend of management considerations including:

1. Abundance of contributing stocks
2. Allocation considerations of concern to the Council
3. Relative abundance in the fishery between Chinook and coho
4. Escapement goals
5. Maximizing harvest potential

Troll coho quotas may be developed for subareas south of Cape Falcon consistent with the above criteria. California recreational catches of coho, including projections of the total catch to the end of the season, would be included in the recreational allocation south of Cape Falcon, but the area south of the Oregon-California border would not close when the allocation is met; except as provided below when the recreational allocation is at 167,000 or fewer fish.

When the south of Cape Falcon recreational allocation is equal to or less than 167,000 coho:

1. The recreational fisheries will be divided into two major subareas, as listed in #2 below, with independent quotas (i.e., if one quota is not achieved or is exceeded, the underage or overage will not be added to or deducted from the other quota; except as provided under #3 below).

2. The two major recreational subareas will be managed within the constraints of the following impact quotas, expressed as a percentage of the total recreational allocation (percentages based on avoiding large deviations from the historical harvest shares):

   a. Central Oregon (Cape Falcon to Humbug Mountain) - 70 percent

   b. South of Humbug Mountain - 30 percent

   In addition,
   (1) Horse Mountain to Point Arena will be managed for an impact guideline of 3 percent of the south of Cape Falcon recreational allocation, and

(2) There will be no coho harvest constraints south of Point Arena. However, the projected harvest in this area (which averaged 1,800 coho from 1986-1990) will be included in the south of Humbug Mountain impact quota.

3. Coho quota transfers can occur on a one-for-one basis between subareas if Chinook constraints preclude access to coho.

### 5.3.3 Tribal Indian Fisheries

#### *5.3.3.1 California*

On October 4, 1993 the Solicitor, Department of Interior, issued a legal opinion in which he concluded that the Yurok and Hoopa Valley Indian tribes of the Klamath River Basin have a federally protected right to the fishery resource of their reservations sufficient to support a moderate standard of living or 50 percent of the total available harvest of Klamath-Trinity basin salmon, whichever is less. The Secretary of Commerce recognized the tribes' federally reserved fishing right as applicable law for the purposes of the MSA (58 FR 68063, December 23, 1993). The Ninth Circuit Court of Appeals upheld the conclusion that the Hoopa Valley and Yurok tribes have a federally reserved right to harvest fish in Parravano v. Babbitt and Brown, 70 F.3d 539 (1995) (Cert. denied in Parravano v. Babbitt and Brown 110, S.Ct 2546 [1996]). The Council must recognize the tribal allocation in setting its projected escapement level for the Klamath River.

#### *5.3.3.2 Columbia River*

Pursuant to a September 1, 1983 Order of the U.S. District Court, the allocation of harvest in the Columbia River was established under the "Columbia River Fish Management Plan" which was implemented in 1988 by the parties of U.S. v. Oregon. This plan replaced the original 1977 plan (pages 16-20 of the 1978 FMP). Since the Columbia River Fishery Management Plan expired on December 31, 1998, fall Chinook in Columbia River fisheries were managed through 2007 under the guidance of annual management agreements among the U.S. v. Oregon parties. In 2008, a new 10 year management agreement was negotiated through the U.S. v. Oregon process, which included revisions to some in-river objectives. A second 10-year plan was negotiated and is in effect for 2018-2027. The 2018-2027 U.S. v Oregon Management Agreement provides a framework within which the relevant parties may exercise their sovereign powers in a coordinated and systematic manner in order to protect, rebuild, and enhance upper Columbia River fish runs while providing harvest for both treaty Indian and non-Indian fisheries. The parties to the agreement are the United States, the states of Oregon, Washington, and Idaho, and four Columbia River treaty Indian tribes-Warm Springs, Yakama, Nez Perce, and Umatilla.

#### *5.3.3.3 U.S. v. Washington Area*

Treaty Indian tribes have a legal entitlement to the opportunity to take up to 50 percent of the harvestable surplus of stocks which pass through their usual and accustomed fishing areas. The treaty Indian troll harvest which would occur if the tribes chose to take their total 50 percent share of the weakest stock in the ocean, is computed with the current version of the Fishery Regulation Assessment Model (FRAM), assuming this level of harvest did not create conservation or allocation problems on other stocks. A quota may be established in accordance with the objectives of the relevant treaty tribes concerning allocation of the treaty Indian share to ocean and inside fisheries. The total quota does not represent a guaranteed ocean harvest, but a maximum allowable catch.

The requirement for the opportunity to take up to 50 percent of the harvestable surplus determines the treaty shares available to the inside/outside Indian and all-citizen fisheries. Ocean coho harvest ceilings off the Washington coast for treaty Indians and all-citizen fisheries are independent within the constraints that (1)

where feasible, conservation needs of all stocks must be met; (2) neither group precludes the other from the opportunity to harvest its share, and; (3) allocation schemes may be established to specify outside/inside sharing for various stocks.

## *6.5 SEASONS AND QUOTAS*

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

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

### 6.5.1 Preferred Course of Action

Because of the need to use both seasons and quotas, depending on the circumstances, the Council will make the decision regarding seasons and quotas annually during the preseason regulatory process, subject to the limits specified below. Fishing seasons and quotas also may be modified during the season as provided under Section 10.2.

### 6.5.2 Procedures for Calculating Seasons

Seasons will be calculated using the total allowable ocean harvest determined by procedures described in Chapter 5, and further allocated to the commercial and recreational fishery in accordance with the allocation plan presented in Section 5.3, and after consideration of the estimated amount of effort required to catch the available fish, based on past seasons.

Recreational seasons will be established with the goal of encompassing Memorial Day and/or Labor Day weekends in the season, if feasible. Opening dates will be adjusted to provide reasonable assurance that the recreational fishery is continuous, minimizing the possibility of an in-season closure.

Criteria used to establish commercial seasons, in addition to the estimated allowable ocean harvests, the allocation plan, and the expected effort during the season, will be: (1) bycatch mortality; (2) size, poundage, and value of fish caught; (3) effort shifts between fishing areas; (4) harvest of pink salmon in odd-numbered years; and (5) protection for weak stocks when they frequent the fishing areas at various times of the year.

### 6.5.3 Species-Specific and Other Selective Fisheries

#### *6.5.3.1 Guidelines*

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

1. Harvestable fish of the target species are available.
2. Harvest impacts on incidental species will not exceed allowable levels determined in the management plan.

3. Proven, documented, selective gear exists (if not, only an experimental fishery should be considered).
4. Significant wastage of incidental species will not occur, or a written economic analysis demonstrates the landed value of the target species exceeds the potential landed value of the wasted species.
5. The selective fishery will occur in an acceptable time and area where wastage can be minimized and target stocks are maximally available.
6. Implementation of selective fisheries for marked or hatchery fish must be in accordance with U.S. v. Washington stipulation and order concerning co-management and mass marking (Case No. 9213, Subproceeding No. 96-3) and any subsequent stipulations or orders of the U.S. District Court, and consistent with international objectives under the PST (e.g., to ensure the integrity of the coded-wire tag program).

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

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

1. Mark-Selective fisheries will first be considered during the months of May and/or June for Chinook and July through September for coho. However, the Council may consider mark-selective fisheries at other times, depending on year to year circumstances identified in the preceding paragraph.
2. The total impacts within each port area or gear group on the critical natural stocks of management concern are not greater than those under the original allocation without the mark-selective fisheries.
3. Other allocation objectives (i.e., treaty Indian, or ocean and inside allocations) are satisfied during negotiations in the North of Cape Falcon Forum.
4. The mark-selective fishery is assessed against the guidelines in Section 6.5.3.1.
5. Mark-selective fishery proposals need to be made in a timely manner in order to allow sufficient time for analysis and public comment on the proposal before the Council finalizes its fishery recommendations.

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

1. Allocate the TAC among the gear groups and port areas according to the basic FMP allocation process described in Section 5.3.1 without the mark-selective fishery.
2. Each gear group or port area may utilize the critical natural stock impacts allocated to its portion of the TAC to access additional harvestable, marked fish, over and above the harvest share established in step one, within the limits of the management constraints listed in the preceding paragraph.

### 6.5.4 Procedures for Calculating Quotas

Quotas will be based on the total allowable ocean harvest and the allocation plan as determined by the procedures of Chapter 5.

To the extent adjustable quotas are used, they may be subject to some or all of the following inseason adjustments:

1. For coho, private hatchery contribution to the ocean fisheries in the OPI area.
2. Unanticipated loss of shakers (bycatch mortality of undersized fish or unauthorized fish of another species that have to be returned to the water) during the season. (Adjustment for coho hooking mortality during any all-salmon-except-coho season will be made when the quotas are established.)
3. Any catch that take place in fisheries within territorial waters that are inconsistent with federal regulations in the EEZ.
4. If the ability to update inseason stock abundance is developed in the future, adjustments to total allowable harvest could be made, where appropriate.
5. The ability to redistribute quotas between subareas depending on the performance toward achieving the overall quota in the area.

Changes in the quotas as a result of the inseason adjustment process will be avoided unless the changes are of such magnitude that they can be validated by the STT and Council, given the precision of the original estimates.

The basis for determining the private hatchery contribution in (1) above will be either coded-wire tag analysis or analysis of scale patterns, whichever is determined by the STT to be more accurate, or another more accurate method that may be developed in the future, as determined by the STT and Council.

In reference to (4) and (5) above, if reliable techniques become available for making inseason estimates of stock abundance, and provision is made in any season for its use, a determination of techniques to be applied will be made by the Council through the Salmon Methodology Review process and discussed during the preseason regulatory process.

### 6.5.5 Procedures for Regulating Ocean Harvests of Pink and Sockeye

Sockeye salmon are only very rarely caught in Council-managed ocean salmon fisheries and no specific procedures have been established to regulate their harvest. Procedures for pink salmon are as follows:

1. All-species seasons will be planned such that harvest of pink salmon can be maximized without exceeding allowable harvests of Chinook and/or coho and within conservation and allocation constraints of the pink stocks.
2. Species specific or ratio fisheries for pink salmon will be considered under the guidelines for species specific fisheries presented in Section 6.5.3, and allocation constraints of the pink stocks.

## APPENDIX C. OREGON PRODUCTION INDEX DATA

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TABLE C-1. Millions of coho smolts[a/] released annually into the OPI area by geographic area and rearing agency.

| Year or Average | Columbia River | | | | | | Oregon Coast | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Washington | | | | | | Private | | | |
| | Oregon | Early | Late | Combined | Federal | Total | ODFW[b/] | Yearlings | Total | California | Total OPI |
| 1960-1965 | 5.6 | - | - | 6.1 | 4.5 | 16.2 | 2.0 | - | 2.0 | 0.4 | 18.6 |
| 1966-1970 | 6.0 | 10.2 | 4.9 | 15.1 | 6.5 | 27.6 | 2.9 | 0.0 | 2.9 | 1.3 | 31.8 |
| 1971-1975 | 6.8 | 10.7 | 6.8 | 17.5 | 4.5 | 28.8 | 3.9 | 0.0 | 3.9 | 1.2 | 33.9 |
| 1976-1980 | 8.0 | 7.3 | 10.1 | 17.4 | 4.7 | 30.1 | 3.8 | 1.4 | 5.2 | 0.7 | 36.0 |
| 1981-1985 | 7.1 | 4.3 | 14.4 | 18.7 | 3.2 | 29.0 | 3.9 | 3.3 | 7.2 | 0.7 | 36.9 |
| 1986-1990 | 7.3 | 3.1 | 15.6 | 18.7 | 4.1 | 30.1 | 5.2 | 1.9 | 7.1 | 1.4 | 38.6 |
| 1991-1995 | 9.8 | 3.6 | 13.9 | 17.5 | 3.5 | 30.8 | 4.9 | - | 4.9 | 0.9 | 36.6 |
| 1996-2000 | 7.2 | 4.5 | 10.9 | 15.4 | 4.3 | 26.9 | 2.0 | - | 2.0 | 0.6 | 29.4 |
| 2001 | 7.6 | 4.2 | 9.7 | 13.9 | 3.7 | 25.2 | 0.9 | - | 0.9 | 0.6 | 26.7 |
| 2002 | 7.5 | 3.3 | 8.6 | 11.9 | 4.3 | 23.7 | 1.0 | - | 1.0 | 0.6 | 25.3 |
| 2003 | 8.2 | 3.3 | 8.7 | 12.0 | 3.1 | 23.3 | 0.8 | - | 0.8 | 0.5 | 24.6 |
| 2004 | 6.7 | 3.0 | 8.8 | 11.8 | 3.6 | 22.1 | 0.8 | - | 0.8 | 0.6 | 23.5 |
| 2005 | 6.1 | 2.5 | 9.1 | 11.6 | 2.8 | 20.6 | 0.8 | - | 0.8 | 0.6 | 22.0 |
| 2006 | 6.1 | 2.8 | 9.0 | 11.7 | 2.6 | 20.4 | 0.8 | - | 0.8 | 0.6 | 21.8 |
| 2007 | 6.2 | 3.1 | 9.0 | 12.1 | 3.1 | 21.4 | 0.7 | - | 0.7 | 0.6 | 22.6 |
| 2008 | 6.9 | 2.8 | 9.2 | 12.0 | 2.9 | 21.9 | 0.4 | - | 0.4 | 0.5 | 22.8 |
| 2009 | 6.9 | 2.5 | 8.3 | 10.8 | 3.2 | 20.9 | 0.4 | - | 0.4 | 0.6 | 21.8 |
| 2010 | 5.9 | 2.0 | 7.5 | 9.5 | 3.1 | 18.6 | 0.3 | - | 0.3 | 0.5 | 19.4 |
| 2011 | 5.8 | 1.8 | 8.4 | 10.2 | 3.0 | 19.0 | 0.4 | - | 0.4 | 0.5 | 19.8 |
| 2012 | 5.9 | 2.2 | 7.4 | 9.7 | 2.7 | 18.2 | 0.4 | - | 0.4 | 0.6 | 19.3 |
| 2013 | 6.0 | 2.0 | 7.8 | 9.8 | 2.9 | 18.6 | 0.4 | - | 0.4 | 0.6 | 19.5 |
| 2014 | 6.5 | 1.5 | 7.4 | 8.9 | 3.0 | 18.4 | 0.4 | - | 0.4 | 0.6 | 19.4 |
| 2015 | 5.7 | 2.1 | 7.4 | 9.5 | 3.0 | 18.2 | 0.3 | - | 0.3 | 0.4 | 18.9 |
| 2016 | 5.7 | 2.2 | 6.9 | 9.1 | 3.0 | 17.7 | 0.3 | - | 0.3 | 0.3 | 18.3 |
| 2017 | 5.5 | 1.7 | 7.6 | 9.2 | 1.9 | 16.7 | 0.3 | - | 0.3 | 0.3 | 17.2 |
| 2018 | 6.1 | 2.1 | 7.3 | 9.4 | 3.6 | 19.2 | 0.3 | - | 0.3 | 0.3 | 19.8 |
| 2019 | 5.3 | 1.3 | 7.9 | 9.2 | 3.2 | 17.8 | 0.3 | - | 0.3 | 0.2 | 18.3 |
| 2020 | 5.6 | 1.2 | 8.2 | 9.4 | 3.6 | 18.5 | 0.3 | - | 0.3 | 0.4 | 19.2 |
| 2021 | 5.9 | 1.0 | 7.6 | 8.6 | 3.4 | 17.9 | 0.3 | - | 0.3 | 0.4 | 18.6 |
| 2022 | 4.7 | 0.9 | 8.0 | 8.9 | 3.5 | 17.1 | 0.3 | - | 0.3 | 0.4 | 17.7 |
| 2023 | 5.9 | 1.3 | 8.3 | 9.6 | 4.2 | 19.7 | 0.2 | - | 0.2 | 0.3 | 20.2 |
| 2024[c/] | 5.3 | 2.2 | 9.1 | 11.2 | 3.1 | 19.6 | 0.3 | - | 0.3 | 0.2 | 20.2 |
| 2025[c/] | 5.4 | 2.2 | 9.3 | 11.5 | 3.8 | 20.7 | 0.3 | - | 0.3 | 0.4 | 21.4 |

a/ Defined here as 30 fish per pound or larger and released in February or later.

b/ Beginning in 1989, does not include minor releases from STEP projects.

c/ Preliminary.

TABLE C-2. Data sets used in predicting Oregon production index hatchery (OPIH) adult coho. Adults and jacks shown in thousands of fish and smolts in millions of fish. All environmental data in year of ocean entry (t-1) except WSST-ONDJ, which is January of adult return year (t).

| Year (t) or Average | Adults (t) | | Jacks (t-1) | | | Columbia River Smolts (t-1) | | | Environmental Index-Month(s)[k/l/] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OPIH[a/] | Post-season FRAM[b/] | Total OPI[c/] | Columbia River[d/] | OR Coast/ CA[e/] | Normal Timed[f/] | Delayed[g/] | Delayed Smolt Adjustment[h/] | NPGO (logged, t-1) | PDO | WSST-ONDJ | PDO-MJJ | MEI-OND | UWI-JAS | STT-AMJ | SSH-AMJ | UWI-SON |
| 1970-1975 | 2,432.6 | - | 119.0 | 113.3 | 5.7 | 26.4 | 1.3 | 4.7 | | | | | | | | | |
| 1976-1980 | 1,879.5 | - | 91.7 | 81.5 | 10.2 | 27.4 | 2.8 | 6.4 | | | | | | | | | |
| 1981-1985[i/] | 867.9 | - | 47.2 | 40.6 | 6.6 | 22.6 | 6.3 | 8.3 | | | | | | | | | |
| 1986-1990 | 1,486.2 | 1,459.0 | 60.6 | 50.6 | 10.0 | 21.0 | 8.9 | 15.5 | | | | | | | | | |
| 1991-1995 | 605.9 | 581.2 | 27.7 | 22.6 | 5.0 | 26.3 | 5.5 | 4.5 | | | | | | | | | |
| 1996-2000 | 320.2 | 329.2 | 22.4 | 18.3 | 4.0 | 22.3 | 3.4 | 2.5 | | | | | | | | | |
| 2001-2005 | 620.0 | 865.1 | 44.6 | 36.6 | 8.0 | 23.7 | 1.3 | 1.9 | | | | | | | | | |
| 2006-2010 | 618.5 | 674.1 | 32.3 | 26.4 | 5.9 | 22.0 | 1.0 | 1.1 | | | | | | | | | |
| 2011 | 442.3 | 454.2 | 23.3 | 22.2 | 1.1 | 18.2 | 0.3 | 0.4 | 1.29 | -0.74 | 0.09 | -0.37 | -2.09 | 34.21 | 11.68 | -30.63 | -32.89 |
| 2012 | 182.3 | 183.1 | 17.9 | 13.9 | 4.0 | 18.1 | 0.9 | 0.7 | 0.79 | -1.57 | -0.12 | -0.77 | -1.22 | 29.33 | 10.70 | -27.63 | -26.30 |
| 2013 | 316.9 | 335.1 | 26.3 | 24.1 | 2.2 | 17.1 | 1.1 | 1.5 | 1.42 | -1.41 | -0.08 | -0.79 | -0.11 | 53.55 | 11.02 | -15.10 | -29.90 |
| 2014 | 1,263.6 | 1,316.5 | 51.4 | 49.4 | 2.0 | 18.0 | 0.6 | 1.6 | 0.36 | -0.93 | -0.40 | -0.86 | -0.15 | 35.30 | 10.66 | -86.57 | -7.81 |
| 2015 | 251.7 | 268.9 | 39.6 | 37.0 | 2.6 | 16.9 | 1.5 | 3.0 | -0.20 | 0.53 | 1.57 | -0.65 | 0.25 | 41.26 | 11.17 | -9.27 | -40.11 |
| 2016 | 233.8 | 247.7 | 19.7 | 18.6 | 1.0 | 16.9 | 1.3 | 1.3 | -1.38 | 0.81 | 0.89 | -0.10 | 2.05 | 40.41 | 10.28 | -95.53 | -7.85 |
| 2017 | 284.8 | 291.8 | 22.9 | 22.4 | 0.4 | 16.5 | 1.3 | 1.6 | -0.16 | 0.63 | 0.84 | 0.54 | -0.51 | 47.98 | 11.58 | -106.00 | -68.23 |
| 2018 | 149.4 | 182.8 | 19.2 | 18.5 | 0.7 | 16.0 | 0.7 | 0.8 | -0.86 | -0.06 | 0.40 | 0.84 | -0.61 | 46.09 | 11.19 | -47.17 | -36.18 |
| 2019 | 300.5 | 340.7 | 47.4 | 46.7 | 0.8 | 18.6 | 0.5 | 1.2 | -1.96 | -0.30 | 0.73 | 0.67 | 0.43 | 41.06 | 10.83 | -101.90 | -12.37 |
| 2020 | 369.6 | 387.7 | 15.2 | 14.9 | 0.3 | 16.8 | 0.2 | 0.2 | -2.28 | -0.04 | -0.07 | 0.52 | 0.39 | 20.07 | 10.47 | -83.77 | 4.07 |
| 2021 | - | 841.3 | 92.3 | 89.1 | 3.2 | 18.1 | 0.4 | 1.9 | -1.84 | -1.04 | 0.46 | 0.07 | -1.15 | 25.56 | 11.40 | -68.43 | -18.89 |
| 2022 | - | 695.6 | 63.7 | 62.4 | 1.3 | 17.6 | 0.3 | 1.0 | -0.91 | -1.58 | -0.15 | -0.42 | -1.43 | 40.85 | 10.97 | -120.23 | -64.07 |
| 2023 | - | 514.2 | 52.7 | 51.9 | 0.8 | 16.8 | 0.3 | 0.9 | -1.26 | -1.78 | -0.05 | -0.82 | -1.63 | 33.83 | 11.47 | -87.23 | -6.61 |
| 2024 | - | 742.3 | 75.2 | 74.3 | 0.8 | 19.6 | 0.2 | 0.7 | -1.72 | -1.88 | 1.20 | -1.40 | 0.70 | 22.84 | 10.40 | -58.47 | -28.15 |
| 2025[j/] | - | 619.3 | 50.7 | 49.4 | 1.3 | 19.6 | 0.4 | 1.1 | -1.89 | -2.11 | 0.51 | -1.81 | -0.60 | 42.63 | 10.82 | -154.60 | -34.90 |
| 2026[j/] | - | - | 44.9 | 44.5 | 0.4 | 20.7 | 0.5 | 1.0 | -1.74 | -1.78 | 0.81 | -2.03 | -1.12 | 33.09 | 10.51 | -136.87 | -27.34 |

a/ Adult OPIH = Harvest impacts plus escapement for public hatchery stocks originating in the Columbia River, Oregon coastal rivers, and the Klamath River, California.

b/ Adult post-season FRAM = Harvest impacts plus escapement for public hatchery stocks originating in the Columbia River, Oregon coastal rivers, and the Klamath River. Estimates derived from the post-season FRAM and used for prediction beginning in 2008.

c/ Jack OPI = Total Jack CR and Jack OC.

d/ Jack CR = Columbia River jack returns corrected for small adults.

e/ Jack OC = Oregon coastal and California hatchery jack returns corrected for small adults.

f/ Sm CR = Total Columbia River smolt releases.

g/ Sm D = Columbia River delayed smolt releases

h/ Correction term for delayed smolts released from Col. R. hatcheries (Col. R. Jacks*(Delayed Smolts/Col. R. Smolts)).

i/ Subsequent to 1983 data not used in predictions due to El Niño impacts.

j/ For Post-season FRAM: Preseason predicted adults.

k/ Beginning in 2024, the OPIH forecast was derived using an ARIMA MAPE-weighted ensemble approach that utalized the most recent 15 years of environmental data within the model.

l/ Environmental Index descriptions:

NPGO - North Pacific Gyre Oscillation

PDO - Pacific Decadal Oscillation

WSST - Winter sea surface temperature, average of October - January

MEI - Multivariate ENSO index

UWI - Upwelling wind index (mean upwelling winds index in months of ocean migration year at 42º N 125º W)

SST - Sea surface temperature

TABLE C-3. Estimated coho salmon natural spawner abundance in Oregon coastal basins for each OCN coho management component.

| Component and Basin[a/] | 2001-2005 Ave. | 2006-2010 Ave. | 2011-2015 Ave. | 2016-2020 Ave. | 2021[b/] | 2022[b/] | 2023 | 2024 | 2025[d/] |
|---|---|---|---|---|---|---|---|---|---|
| NORTHERN | | | | | | | | | |
| Necanicum | 2,534 | 2,102 | 2,079 | 639 | -- | -- | 1,637 | 1,859 | 1,249 |
| Nehalem | 20,159 | 19,364 | 11,296 | 7,402 | -- | -- | 14,388 | 19,228 | 16,650 |
| Tillamook | 6,563 | 9,408 | 9,355 | 4,006 | -- | -- | 13,325 | 11,756 | 21,181 |
| Nestucca | 7,287 | 2,063 | 3,590 | 3,145 | -- | -- | 3,894 | 4,850 | 5,382 |
| Ind. Tribs. | 573 | 1,132 | 1,375 | 446 | -- | -- | 1,893 | 841 | 1,601 |
| TOTAL | 37,116 | 34,068 | 27,695 | 15,638 | 42,811 | 52,956 | 35,137 | 38,534 | 46,063 |
| NORTH CENTRAL | | | | | | | | | |
| Salmon | 506 | 672 | 1,822 | 456 | 571 | 1,324 | 1,249 | 701 | 1,632 |
| Siletz | 6,902 | 11,678 | 13,392 | 4,198 | 15,428 | 16,466 | 5,410 | 10,864 | 8,446 |
| Yaquina | 10,571 | 7,618 | 11,375 | 3,586 | 16,721 | 6,484 | 5,833 | 16,661 | 5,508 |
| Beaver Ck. | 3,487 | 1,885 | 2,636 | 1,143 | 2,483 | 2,058 | 943 | 2,032 | 1,107 |
| Alsea | 8,344 | 8,353 | 15,626 | 5,445 | 13,633 | 19,141 | 7,653 | 12,421 | 8,929 |
| Siuslaw | 24,138 | 16,700 | 20,679 | 7,197 | 38,031 | 24,892 | 21,391 | 24,578 | 13,439 |
| Ind. Tribs. | 3,279 | 2,017 | 1,931 | 839 | 1,747 | 1,568 | 83 | 2,264 | 1,172 |
| TOTAL | 57,227 | 48,922 | 67,461 | 22,862 | 88,614 | 71,933 | 42,562 | 69,521 | 40,233 |
| SOUTH CENTRAL | | | | | | | | | |
| Umpqua | 37,165 | 39,149 | 44,750 | 19,965 | 49,266 | 9,632 | 30,796 | 16,223 | 14,796 |
| Coos | 26,572 | 16,423 | 13,841 | 6,974 | -- | 7,370 | 24,020 | 17,396 | 5,009 |
| Coquille | 15,571 | 19,437 | 26,046 | 7,916 | -- | 19,078 | 7,707 | 10,742 | 5,820 |
| Floras Ck. | 3,568 | 3,352 | 3,252 | 792 | -- | 871 | 369 | 1,139 | 369 |
| Sixes R. | 157 | 140 | 303 | 130 | -- | 113 | 19 | 105 | 272 |
| Coastal Lakes | 18,205 | 22,557 | 15,920 | 6,641 | 19,664 | 8,049 | 12,396 | 7,631 | 9,801 |
| Ind. Tribs. | - | 224 | 58 | 8 | -- | 0 | 0 | 2 | 11 |
| TOTAL | 101,238 | 101,282 | 104,171 | 42,425 | 114,897 | 45,113 | 75,307 | 53,238 | 36,078 |
| SOUTH | | | | | | | | | |
| Rogue[c/] | 12,349 | 3,140 | 6,066 | 5,218 | 8,992 | 7,865 | 3,565 | 9,056 | 12,387 |
| COASTWIDE | 207,930 | 187,412 | 205,393 | 86,143 | 255,314 | 177,867 | 156,571 | 170,349 | 134,761 |

a/ The sum of the individual basins may not equal the aggregate totals due to the use of independent estimates at different geographic scales. The average data may include years when no data was available.

b/ (--) Estimates were not made due to low survey rates and sampling levels.

c/ Mark recapture estimate based on seining at Huntley Park in the lower Rogue River.

d/ Preliminary.

TABLE C-4. Data set used in predicting Oregon coastal natural river (OCNR) coho ocean recruits with random survey sampling and Mixed Stock Model (MSM) accounting. All environmental data in year of ocean entry (t-1) except SST-J, which is January of adult return year (t). Spawners is parent brood (t-3). Recruits shown in thousands of fish.

| | Recruits | | Environmental Index-Month(s)[a/] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year (t) | Adults | Spawners | PDO-MJJ | UWI-JAS | UWI-SON | SSH-AMJ | SST-AMJ | SST-J | MEI-ON | SPR.TRN |
| 1970-1975 | 237.5 | 112.3 | -0.7 | 35.5 | -19.7 | -95.3 | 11.6 | 9.0 | -0.7 | 98.3 |
| 1976-1980 | 204.3 | 30.7 | -0.4 | 26.4 | -29.2 | -120.0 | 11.1 | 9.9 | -0.1 | 86.0 |
| 1981-1985 | 148.9 | 26.8 | -0.2 | 28.4 | -30.0 | -102.4 | 11.4 | 10.4 | 0.3 | 85.0 |
| 1986-1990 | 153.8 | 28.9 | 0.1 | 29.6 | -39.2 | -95.9 | 11.6 | 10.4 | 0.1 | 82.0 |
| 1991-1995 | 150.7 | 27.0 | 0.3 | 29.3 | -40.8 | -82.0 | 11.6 | 10.4 | 0.4 | 89.0 |
| 1996-2000 | 131.8 | 25.2 | 0.6 | 31.2 | -49.0 | -65.1 | 11.7 | 10.8 | 0.3 | 94.8 |
| 2000 | 156.6 | 21.5 | 0.0 | 35.8 | -26.8 | -45.7 | 11.4 | 10.2 | -0.7 | 72.0 |
| 2001 | 246.1 | 34.7 | -0.7 | 47.1 | -38.2 | -114.9 | 10.7 | 10.1 | -0.3 | 61.0 |
| 2002 | 227.3 | 61.0 | -0.9 | 50.5 | -25.9 | -136.6 | 10.1 | 11.0 | 0.8 | 80.0 |
| 2003 | 164.0 | 143.1 | -0.4 | 55.5 | -26.4 | -50.7 | 11.1 | 10.3 | 0.3 | 112.0 |
| 2004 | 146.3 | 236.4 | -0.2 | 27.0 | 4.3 | -49.2 | 11.9 | 10.2 | 0.5 | 110.0 |
| 2005 | 113.3 | 213.3 | 0.2 | 51.8 | -9.0 | -11.5 | 12.5 | 11.5 | -0.7 | 145.0 |
| 2006 | 64.9 | 154.1 | 0.5 | 53.6 | -14.1 | -21.5 | 11.2 | 9.8 | 0.9 | 112.0 |
| 2007 | 157.0 | 139.9 | 0.5 | 27.5 | -9.9 | -108.1 | 10.6 | 8.9 | -1.1 | 74.0 |
| 2008 | 262.9 | 104.7 | 0.2 | 32.7 | -10.7 | -96.9 | 9.6 | 9.4 | -1.0 | 89.0 |
| 2009 | 255.6 | 57.3 | -0.1 | 24.3 | -47.1 | -78.9 | 10.5 | 10.8 | 0.8 | 82.0 |
| 2010 | 352.4 | 156.1 | -0.4 | 34.2 | -32.9 | -30.6 | 11.7 | 10.1 | -2.1 | 100.0 |
| 2011 | 98.1 | 245.4 | -0.8 | 29.3 | -26.3 | -27.6 | 10.7 | 9.2 | -1.2 | 100.0 |
| 2012 | 130.2 | 244.7 | -0.8 | 53.6 | -29.9 | -15.1 | 11.0 | 9.9 | -0.1 | 121.0 |
| 2013 | 377.4 | 336.0 | -0.9 | 35.3 | -7.8 | -86.6 | 10.7 | 9.1 | -0.1 | 100.0 |
| 2014 | 64.6 | 80.2 | -0.7 | 41.3 | -40.1 | -9.3 | 11.2 | 12.3 | 0.2 | 101.0 |
| 2015 | 74.3 | 110.8 | -0.1 | 40.4 | -7.9 | -95.5 | 10.3 | 11.0 | 2.0 | 92.0 |
| 2017 | 67.4 | 337.7 | 0.5 | 48.0 | -68.2 | -106.0 | 11.6 | 9.9 | -0.5 | 85.0 |
| 2018 | 74.0 | 52.4 | 0.8 | 46.1 | -36.2 | -47.2 | 11.2 | 11.0 | -0.6 | 116.0 |
| 2019 | 99.2 | 67.9 | 0.7 | 41.1 | -12.4 | -101.9 | 10.8 | 11.1 | 0.4 | 107.0 |
| 2020 | 100.3 | 60.1 | 0.5 | 20.1 | 4.1 | -83.8 | 10.5 | 10.5 | 0.4 | 103.0 |
| 2021 | 251.3 | 67.8 | 0.1 | 25.6 | -18.9 | -68.4 | 11.4 | 10.3 | -1.2 | 140.0 |
| 2022 | 190.7 | 87.7 | -0.4 | 40.8 | -64.1 | -120.2 | 11.0 | 10.2 | -1.4 | 80.0 |
| 2023 | 173.5 | 100.2 | -0.8 | 33.8 | -6.6 | -87.2 | 11.5 | 10.6 | -1.6 | 84.0 |
| 2024 | 197.7 | 222.5 | -1.4 | 22.8 | -28.1 | -58.5 | 10.6 | 11.4 | 0.7 | 114.0 |
| 2025[b/] | 140.9 | 162.0 | -1.8 | 42.6 | -34.9 | -154.6 | 10.8 | 10.4 | -0.6 | 91.0 |
| 2026[b/] | 207.7 | 140.6 | -2.0 | 33.1 | -27.3 | -136.9 | 10.5 | 10.9 | -1.1 | 101.0 |

a/ Environmental Index descriptions:

PDO - Pacific Decadal Oscillation (4-year moving average)

UWI - Upwelling wind index (mean upwelling winds index in months of ocean migration year at 42º N 125º W)

SSH - Sea surface height (South Beach, OR at 44º 37.5´ N, 124 º 02.6´ W)

SST - Sea surface temperature (mean sea surface temperature in January of return year at Charleston, OR)

MEI - Multi-variate ENSO index

SPR.TRN - Spring transition date (Julian)

b/ Adult recruits is a forecasted number.

c/ PDO-MJJ values from 1970-2024 are from ERSST V5. Prior to 2024, data used in OCNR forecasting and published in Preseason Report I was retrieved from UW-JISAO which is no longer being updated.

d/ SSH-AMJ & MEI-OND changes minorly every year to account for long term trends. Further information can be found in Rupp et al., 2012.

TABLE C-5. Models used in the 2026 ensemble Oregon Production Index Hatchery (OPIH) Adult coho forecast model with their predictive ranking, variables included, weight in the ensemble model, and ARIMA structure.

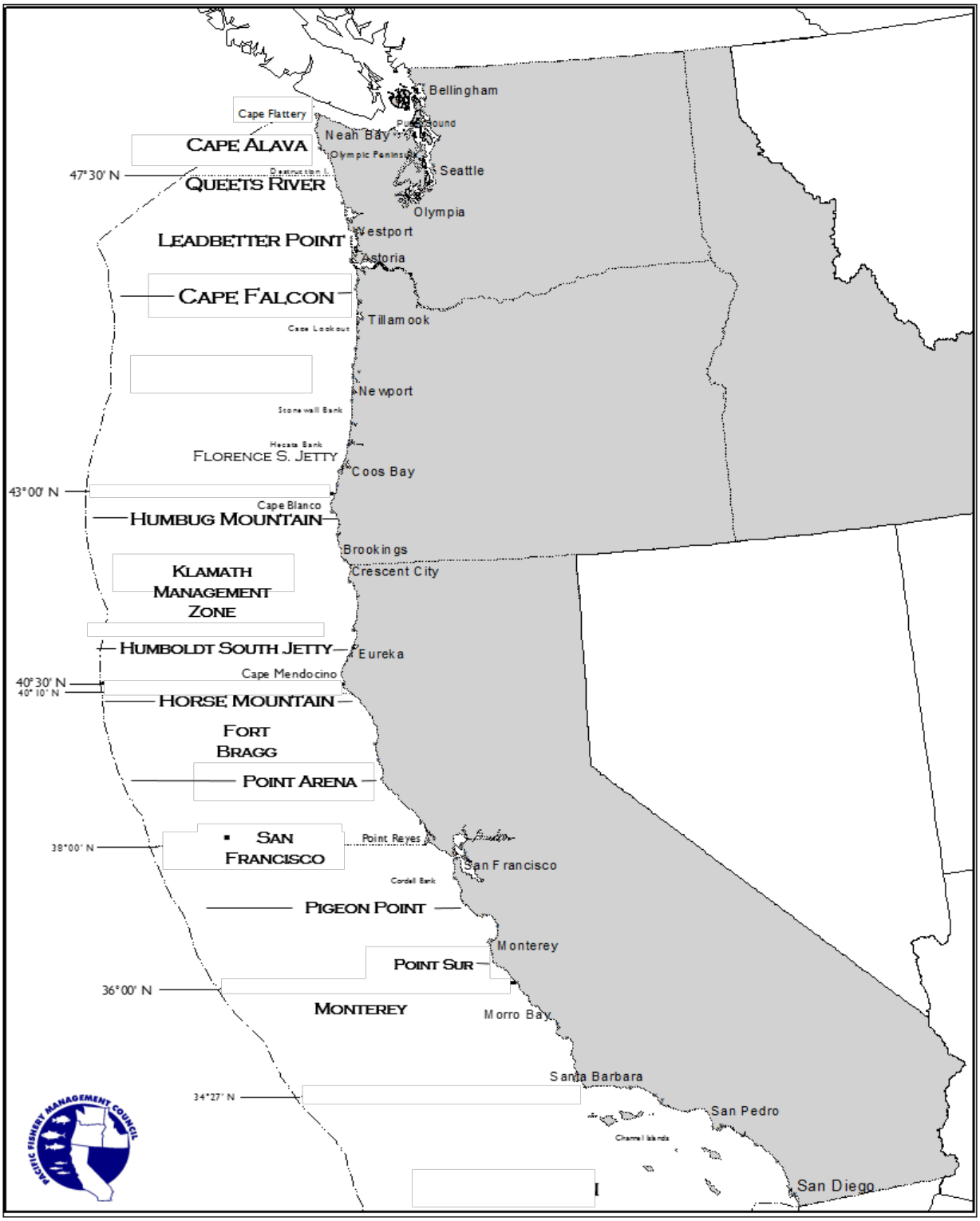
| Model Rank | Variables | Weight | ARIMA Order[a/] Auto-regressive | Differ-encing | Moving Average Structure |
|---|---|---|---|---|---|
| 1 | lag1_log_JackOPI + lag1_log_SmAdj + lag1_PDO + WSST_A + PDO.MJJ + UWI.JAS | 0.11 | 0,0 | 0,0 | 0,0 |
| 2 | lag1_log_JackOPI + lag1_log_SmAdj + lag1_PDO + WSST_A + PDO.MJJ | 0.10 | 0,0 | 0,0 | 0,0 |
| 3 | lag1_log_JackOPI + lag1_log_SmAdj + lag1_PDO + WSST_A + PDO.MJJ + SST.AMJ | 0.10 | 0,0 | 0,0 | 0,0 |
| 4 | lag1_log_JackOPI + lag1_log_SmAdj + lag1_NPGO + WSST_A + PDO.MJJ + UWI.JAS | 0.10 | 0,0 | 0,0 | 0,0 |
| 5 | lag1_log_JackOPI + lag1_log_SmAdj + lag1_PDO + WSST_A + PDO.MJJ +MEI.OND | 0.10 | 0,0 | 0,0 | 0,0 |
| 6 | lag1_log_JackOPI + lag1_NPGO + SST.AMJ | 0.10 | 2,0 | 0,0 | 1,0 |
| 7 | lag1_log_JackOPI + lag1_log_SmAdj + lag1_NPGO + WSST_A + PDO.MJJ + MEI.OND | 0.10 | 1,0 | 0,0 | 0,0 |
| 8 | lag1_log_JackOPI + lag1_log_SmAdj + lag1_NPGO + WSST_A + MEI.OND + UWI.JAS | 0.10 | 0,0 | 0,0 | 0,0 |
| 9 | lag1_log_JackOPI + lag1_PDO + WSST_A + PDO.MJJ + SSH.AMJ | 0.09 | 0,0 | 0,0 | 0,0 |
| 10 | lag1_log_JackOPI + lag1_NPGO + WSST_A + MEI.OND + UWI.JAS | 0.09 | 0,0 | 0,0 | 0,0 |

a/ The general component is represented by the number before the comma. The seasonal component is represented by the number after the comma. For example, a "1,0" in the auto regressive category would indicate AR1 and no seasonal autoregression.

TABLE C-6. The 2026 Ensemble Mean of the six predictors based on environmental conditions and spawners used to forecast the Oregon Coast Natural River (OCNR) systems.

| Variables | | | Prediction | $r^2$ | OCV[a/] |
|---|---|---|---|---|---|
| PDO | Spring Transition (Julian date; t-1) | Log Spawners (t-3) | 192 | 0.54 | 0.42 |
| PDO | Multivariate ENSO Index (Oct-Dec; t-1) | Upwelling (July-Sept; t-1) | 227 | 0.61 | 0.49 |
| PDO | Spring Transition (Julian date; t-1) | Multivariate ENSO Index (Oct-Dec; t-1) | 192 | 0.58 | 0.49 |
| PDO | Upwelling (July-Sept; t-1) | Sea Surface Temperature (May-Jul; t-1) | 247 | 0.57 | 0.43 |
| PDO | Sea Surface Height (Apr-June; t-1) | Upwelling (July-Sept; t-1) | 237 | 0.62 | 0.45 |
| PDO | Upwelling (Sept-Nov; t-1) | Sea Surface Temperature (Jan; t) | 163 | 0.57 | 0.43 |
| Ensemble Mean | | | 208 | 0.63 | 0.51 |
| (90% prediction intervals) | | | (81.082 - 526.431) | | |

a/ OCV – ordinary cross-validation score




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